

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

HONORABLE JOHN A. KRONSTADT, JUDGE PRESIDING

UNITED STATES OF AMERICA,

Plaintiff,

**Vs .**

YI-CHI-SHIH,

Defendant.

No.

LACR18-00050 (B) -JAK

REPORTER'S TRANSCRIPT OF PROCEEDINGS

JURY TRIAL, DAY 8

VOLUME II

LOS ANGELES, CALIFORNIA

THURSDAY, MAY 30, 2019

MIRIAM V. BAIRD, CSR 11893  
OFFICIAL U.S. DISTRICT COURT REPORTER  
411 WEST FOURTH STREET, SUITE 1-053  
SANTA ANA, CALIFORNIA 92701  
MVB11893@AOL.COM

A P P E A R A N C E S

**IN BEHALF OF THE PLAINTIFF,  
UNITED STATES OF AMERICA:**

MELANIE ANN HANSON SARTORIS  
JUDITH HEINZ  
JAMES HUGHES  
WILLIAM ROLLINS  
AUSA - OFFICE OF US  
ATTORNEY  
UNITED STATES DISTRICT  
COURTHOUSE  
312 NORTH SPRING STREET  
12TH FLOOR  
LOS ANGELES, CA 90012  
- AND -  
KHALDOUN SHOBAKI  
AUSA - OFFICE OF US  
ATTORNEY  
CYBER AND INTELLECTUAL  
PROPERTY CRIMES SECTION  
312 NORTH SPRING STREET  
SUITE 1500  
LOS ANGELES, CA 90012

**IN BEHALF OF THE DEFENDANT,  
YI-CHI SHIH:**

JAMES W. SPERTUS  
JOHN HANUSZ  
CRISTA CULVER  
SPERTUS LANDES AND UMHOFFER  
LLP  
1990 SOUTH BUNDY DRIVE  
SUITE 705  
LOS ANGELES, CA 90025

INDEX

WITNESS:

PAGE:

CROSS-EXAMINATION RESUMED	4
REDIRECT EXAMINATION	11
RECROSS-EXAMINATION	22
<u>Kiet Mai, Government's witness, sworn</u>	33
DIRECT EXAMINATION	34
<u>Jeffrey Brian Barner, Government's witness,</u> <u>previously sworn</u>	56
EXAMINATION BY MR. ROLLINS	74

\*\*\*\*\*

EXHIBITS:

Exhibit 258 received	38
----------------------	----

\*\*\*\*\*

1 LOS ANGELES, CALIFORNIA; THURSDAY, MAY 30, 2019; 11:57 A.M.

2 ---

3 THE CLERK: All rise.

4 THE COURT: Please be seated. All 15 jurors are  
5 back.

6 Mr. Barner, would you please restate your name.

7 THE WITNESS: Jeffrey Brian Barner.

8 THE COURT: Do you understand that you remain under  
9 oath?

10 THE WITNESS: Yes, I do.

11 THE COURT: Please proceed.

12 MR. SPERTUS: Your Honor, I reached a stipulation  
13 with the government as to the authenticity of eight exhibits.  
14 Their only objection is relevance. I'd like to read the  
15 exhibit numbers: 3600, 3602, 3604, 3610, 3611, 3612, 3613,  
16 and 3633.

17 THE COURT: All right. All of those exhibits are  
18 marked for identification. And what -- these are e-mails?

19 MR. SPERTUS: Yes. And I placed a stack in front  
20 of Dr. Barner, which I won't seek to admit yet.

21 **CROSS-EXAMINATION RESUMED**

22 BY MR. SPERTUS:

23 Q. Dr. Barner, before I direct your attention to exhibits,  
24 were you very focused on the quarterly revenue coming out of  
25 the foundry business at Cree?

1 A. Yes. It's a major objective.

2 Q. I couldn't hear you.

3 A. Yes. It's a major objective.

4 Q. And the timing of runs impacted quarterly revenue  
5 because one run could be pushed to another quarter and hurt  
6 estimates, right?

7 A. That's correct.

8 Q. And some of the internal Cree planning is based on the  
9 anticipated lot runs coming in the future during a quarter,  
10 right?

11 A. That's correct.

12 Q. What does it means for Cree to book revenue?

13 A. It means a customer has placed an order. We've entered  
14 it into our system and formally acknowledged that we will  
15 complete that order. Then we provide a delivery date in  
16 development runs.

17 This includes various milestones throughout  
18 execution of that service project, and those dates are given.  
19 And then we do our very best to execute to that schedule.

20 Q. And are Cree's projected earnings dependent on  
21 successful execution of its plan schedules?

22 A. Could you repeat that question, please.

23 Q. When Cree projects its revenue and its earnings, are  
24 those projections that Cree makes about its financial  
25 performance dependent on meeting the schedules for production

1 that Cree puts in place based on customer orders?

2 A. They are very loosely tied.

3 Q. How are they not directly tied? Can you explain that?

4 A. Simply because I may not know all of the foundry  
5 projects until the order is actually placed. Sometimes  
6 there's development activities on the customer part. There  
7 may be delays in the design activity. There may be delays in  
8 placing the purchase order.

9 There's a variety of things that go in there, and  
10 what I do is I provide an overall guidance of the amount of  
11 foundry business I expect to have and execute during a  
12 quarter. It may be directly tied to individual orders, and  
13 it may be my estimate of orders that I anticipate coming in  
14 based on discussions with my customers.

15 Q. Okay. And for all of these questions, I'm directing  
16 your attention only to the portion of the Cree business that  
17 you manage. Okay? Do you understand that?

18 A. Yes, I do.

19 Q. During the time that Cree came back to you in  
20 December 2014 to discuss doing a second run of wafers --

21 THE COURT: Could you -- you said Cree. Did you  
22 mean it?

23 MR. SPERTUS: I'm sorry. Can I ask the question  
24 over and strike that?

25 THE COURT: Yes.

1 BY MR. SPERTUS:

2 Q. Dr. Barner, in December 2014 did MicroEx come back to  
3 you for a second run?

4 A. Yes.

5 Q. And during that time were you very focused on how well  
6 the foundry business was doing?

7 A. I'm always focused on how well the foundry business is  
8 doing.

9 Q. How much of your attention is devoted to how well the  
10 foundry business is doing?

11 A. Sorry. Didn't you just ask that question?

12 Q. You said always. Did you mean to suggest that  
13 100 percent of your attention is focused on how well the  
14 foundry business is doing?

15 A. In all aspects, yes.

16 Q. Okay. So that is what dominates your attention as the  
17 manager of the foundry business, right?

18 A. How well we are executing projects, doing design work,  
19 testing wafers, producing wafers, and having highly satisfied  
20 customers is a hundred percent of my focus.

21 MR. SPERTUS: Your Honor, I think I just have one  
22 more area.

23 BY MR. SPERTUS:

24 Q. Can you describe the difference again between Gallium  
25 Arsenide wafers and Gallium Nitride wafers?

1 A. The Gallium Arsenide in general terms is technology that  
2 has been applied towards microwave circuitry since the '60s,  
3 maybe even earlier in terms of actually integrated circuits.  
4 It certainly started to take place in the '60s and '70s.

5 It basically is a more narrow bandgap material,  
6 which means it doesn't support high voltages. It doesn't  
7 support high voltages with high current.

8 Gallium Nitride on silicon carbide is a wide  
9 bandgap semiconductor material. It supports very high  
10 voltages and very high currents, which, in terms of very  
11 simple analysis, voltage times amperage is power, and it  
12 enables you to make very powerful devices, in particular  
13 amplifiers for microwave application.

14 Q. So are the -- and are the manufacturing processes for  
15 Gallium Nitride different than the manufacturing processes  
16 for Gallium Arsenide?

17 A. Yes.

18 Q. And if somebody is trying to build a Gallium Arsenide  
19 foundry, is it of any benefit to them to order a Gallium  
20 Nitride wafer other than just testing amplifiers and  
21 transistors and things like that?

22 A. Yeah. While there are differences, there's a tremendous  
23 amount of commonality as well.

24 Q. Because they both are wafers?

25 A. No. I mean, you use very similar metallization.



1 Typically both processes use gold interconnect or  
2 transmission line. Media on the wafer, they're fabricated,  
3 which we refer to metal 1 and 2. These are transmission  
4 lines, and they can be made into inductors and interconnects.  
5 They connect to the field of transistors, the capacitors, the  
6 resistors, the substrate vias, all of which is used to  
7 fabricate these integrated circuits.

8 Q. You can't determine a manufacturing process by having a  
9 finished product wafer, correct?

10 A. You can gain a tremendous amount of insight, especially  
11 if you have the analytical tools to basically chemically and  
12 physically bore down into that substrate to see how the  
13 layers, what materials are used there.

14 That gives you tremendous insight in terms of how  
15 that device might be manufactured. It would not tell you  
16 everything.

17 Q. Okay. And if you didn't have those tools, how much does  
18 a wafer purchase tell you about the manufacturing process?

19 MS. HEINZ: Objection, Your Honor. Relevance.  
20 Calls for speculation.

21 THE COURT: Sustained.

22 BY MR. SPERTUS:

23 Q. When you use the term tools, are they very expensive  
24 machines?

25 A. Not necessarily. They could be a very inexpensive

1 microscope.

2 Q. Okay. So using a microscope on a chip can tell you  
3 about the manufacturing processes used to make that chip?

4 A. It will give you insight, yes.

5 Q. So by analogy if I went to a book store and bought a  
6 book off a shelf, I'll be able to, for example, determine  
7 what glue was used, but I would not be able to determine  
8 anything beyond visual inspection of the book I purchased,  
9 right?

10 MS. HEINZ: Objection. Relevance.

11 THE COURT: Sustained.

12 BY MR. SPERTUS:

13 Q. Is your testimony on direct designed in any manner to  
14 communicate somehow that Dr. Shih learned about the design  
15 processes at Cree because he ordered a wafer?

16 MS. HEINZ: Objection, Your Honor. Argumentative.

17 THE COURT: Sustained.

18 BY MR. SPERTUS:

19 Q. Well, when you were describing how important Cree's  
20 technology is during your direct exam -- I just want  
21 clarity -- did you intend to communicate somehow that  
22 Dr. Shih figured out Cree's manufacturing processes when he  
23 bought a wafer?

24 MS. HEINZ: Objection. Relevance. Misstates the  
25 direct.

1 THE COURT: Sustained as framed.

2 MR. SPERTUS: Can I have a moment, Your Honor?

3 THE COURT: Yes.

4 (Pause in proceedings)

5 MR. SPERTUS: Your Honor, I don't believe I have  
6 any further questions. If I can just have one moment to  
7 confer.

8 THE COURT: That's fine. Thank you.

9 MR. SPERTUS: Your Honor, I just would move for  
10 admissibility of the exhibits I enumerated at the start based  
11 on the testimony of Dr. Barner.

12 THE COURT: Can we go over that later?

13 MR. SPERTUS: Yes.

14 THE COURT: Thanks.

15 MR. SPERTUS: No further questions, Your Honor.

16 THE COURT: Thank you.

17 Thank you, Mr. Spertus -- subject to potential  
18 recall, correct?

19 MR. SPERTUS: Actual recall is definite, yes.

20 THE COURT: That's fine. Thank you.

21 Redirect?

22 MS. HEINZ: Yes, Your Honor.

23 THE COURT: Please.

24 **REDIRECT EXAMINATION**

25

1 BY MS. HEINZ:

2 Q. Dr. Barner, could you please look at Exhibit 6. This is  
3 admitted.

4 MS. HEINZ: Can we publish Exhibit 6, please.

5 THE COURT: You may.

6 MS. HEINZ: I'd like to publish attachment one. I  
7 believe the numbers end in 5344.

8 THE COURT: That's fine. Thank you.

9 BY MS. HEINZ:

10 Q. Dr. Barner, could you please look at paragraph number  
11 six on the exhibit in front of you.

12 A. (Witness complies.) Yes.

13 Q. The letters there where it says N back slash A, do you  
14 see that?

15 A. I do.

16 Q. What did you interpret that to mean?

17 A. As a customer saying it was not applicable.

18 Q. And did you also interpret it to mean that the product  
19 was not going to be shipped outside the United States?

20 A. Yes, I did.

21 Q. Do customers that purchase Cree's custom designed  
22 foundry services attempt to design MMICs that operate as they  
23 are designed?

24 A. Yes.

25 Q. Why?

1 A. Because it is an expensive process to go through this  
2 development activity. It can cost hundreds of thousands of  
3 dollars. So they want their design to meet the requirements  
4 the first time they do that.

5 Q. How can a MMIC designer -- what can a MMICs designer do  
6 before the MMICs are actually made to see if the MMICs will  
7 work as they're designed?

8 A. They would use the design kit. Do very careful  
9 analysis. They may employ many other design tools including  
10 thermal analysis, electromagnetic analysis, which is  
11 basically a tool that does -- it divides up the problem into  
12 a variety of finite element analysis that predicts how the  
13 electric and magnetic fields will propagate through the  
14 circuit.

15 And this is in addition to what the design kit  
16 tools like ADS and Microwave Office will do. If you do all  
17 of those things and you get all of it right, then in  
18 principle the circuit will perform as designed.

19 Q. Can an experienced MMIC designer predict the power level  
20 of what the design will generate?

21 A. Generally, yes.

22 Q. How?

23 A. By using tools, by using the models we provide, the  
24 design kit. And through all of that careful analysis, they  
25 would be able to predict under the appropriate conditions,

1 the thermal conditions, the applied bias conditions. And  
2 then the environment that the chip is intended to be placed  
3 in, it would pretty accurately predict the output power and  
4 performance of that circuit.

5 Q. Based on those same factors, can an experienced MMIC  
6 designer accurately predict the frequency range that the MMIC  
7 will generate or operate at?

8 A. Generally speaking, yes, but it's a much more difficult  
9 aspect in that it's very difficult to get all of those  
10 potential factors correct the first time. And sometimes the  
11 very best thing you can do is come close, see the factors  
12 that push it towards one frequency higher or lower, use those  
13 factors, and adjust the design on the second iteration in  
14 order to produce a circuit that hits all of the targets.

15 Q. Now, on cross-examination you talked about how you, you,  
16 when we were talking to the FBI, that you estimated the  
17 performance of the MMIC power amplifiers that Cree made for  
18 MicroEx. And I'm specifically talking about batch one.

19 How were you able to come to that estimation?

20 A. Well, I looked at the layout of those chips, determined  
21 how many, what we refer to as, millimeters of periphery in  
22 the actual transistor. That's basically the number of  
23 fingers, if they're each .1 millimeter long and there's ten  
24 fingers. Ten times .1 would be one millimeter size.

25 We know that our processes at 28 volts or 40 volts,

1 depending on which process he was using, would produce  
2 anywhere from about four, four and a half watts per  
3 millimeter and as much as six and a half watts per millimeter  
4 at temperatures, at the conditions that these chips would  
5 typically be operated at, and use that to establish what  
6 power level it was.

7 And then I also looked at the relative size of the  
8 inductors and transmission passive element aspects that were  
9 on the circuit to determine potentially how long they were,  
10 how much loss, and what frequency they might potentially  
11 operate.

12 And just from general perspective, you know, a one-  
13 or three-gigahertz signal versus a ten-gigahertz signal will  
14 be -- the ten-gigahertz signal will be substantially smaller.  
15 And I observed that in those chips.

16 Q. And would an experienced MMIC designer be able to do in  
17 essence what you did?

18 A. Yes.

19 Q. Now, Cree tested two of the MMICs, MMIC power wafers --  
20 sorry, two of the MMIC power amplifiers that were on the  
21 wafer that FBI provided to Cree; is that correct?

22 A. That is correct.

23 Q. And one -- and Cree determined that one of those was  
24 export controlled; is that correct?

25 A. Based on the performance on wafer into a 50 ohm load,

1 yes, that's correct.

2 Q. Now, there were other MMICs on the wafer that Cree did  
3 not test; is that correct?

4 A. That's correct.

5 Q. I'm going to ask you some questions about on-wafer  
6 testing. Is on-wafer testing, can it be performed on diced  
7 wafers?

8 A. Generally not. But quite often someone may attach that  
9 diced die to a shim or other metal structure that enables it  
10 to be thermally sunk. Then they could do full test on those  
11 MMICs using the same type of probes that come down and touch  
12 the various contact pads of the circuit.

13 Q. Is it more typical to conduct on-wafer testing on  
14 undiced wafers?

15 A. Yes.

16 Q. And with respect to on-wafer testing on an undiced  
17 wafer, what kind of test would be done?

18 A. There can be a variety of DC tests where you basically  
19 apply a DC voltage and see how much current goes through that  
20 particular part of the circuit.

21 You can also come in with what we refer to as a  
22 ground signal, ground RF probe that basically can be  
23 contacted to the input and output of the RF pass. And then  
24 you can apply DC bias to the actual MMIC so that it is  
25 activated. Then you can put input power and see how much



1 output power comes in.

2 When you do an on-wafer test, because you do not  
3 have a substantial thermal sink -- after all, these are very  
4 high-power devices that can generate many hundreds of watts  
5 of heat, and so it's very important that you also do pulse  
6 testing during those RF tests.

7 So we actually turn the device on and off very  
8 quickly. It's only on a very short period of time, and then  
9 you can determine the RF performance when the RF pulse is on.

10 Q. Now, I believe you already testified that an undiced  
11 wafer will contain the PCMs?

12 A. That's correct.

13 Q. So if someone were to try to reverse engineer a Cree  
14 wafer in China, would it be helpful for them to have the PCM?

15 A. Yes.

16 Q. Why?

17 A. Because there's a variety of inline tests that we do  
18 there as well, including things that are not part of our  
19 overall goodness PCM specifications.

20 But there are aspects of the circuit process that  
21 we test in those structures to ensure that, say, for example,  
22 M-1 or the lower metal layer is connecting to the top metal  
23 layer where it's supposed to, and those interconnects are  
24 actually functioning to the performance and the reliability  
25 and the quality that we intend to put into our wafers.

1 Q. So having the PCMs would help someone reverse engineer  
2 the actual layered structure of the wafer; is that correct?

3 A. It would give them further insight, yes.

4 Q. And is that something that is particularly proprietary  
5 to Cree, the way that the wafer is layered?

6 A. Yes.

7 Q. I want you to look at an exhibit that was introduced  
8 during the -- by the defense, which is 4281.

9 THE COURT: 4281 is the presentation?

10 MS. HEINZ: Yes, Your Honor.

11 BY MS. HEINZ:

12 Q. I'm showing on the monitor page 5 of this exhibit. Do  
13 you see that?

14 A. Yes, I do.

15 Q. Okay. And do you see there where it says market  
16 segments?

17 A. Yes, I do.

18 Q. Does that include military?

19 A. Yes, it does.

20 Q. Now I'm going to turn to page 14 of this exhibit. I  
21 believe you testified previously about the meaning of COTS?

22 A. Yes.

23 Q. And I forgot the exact meaning. Can you refresh my  
24 recollection on that?

25 A. Commercial off the shelf.

1 Q. The MMICs that we've been discussing that were  
2 manufactured by Cree for MicroEx, was there anything about  
3 those that was commercial off the shelf?

4 A. No.

5 Q. If someone were trying to reverse engineer Cree's  
6 process in China, would it be helpful for them to have  
7 undiced wafers?

8 A. Yes.

9 Q. If you had known that MicroEx and Kiet Mai or Kiet Mai  
10 was providing his login information to the PDK to someone  
11 else, would Cree have entered into any kind of agreement with  
12 him and given him access?

13 A. No. In fact, I'd cut off his access immediately.

14 Q. Directing your attention to the YouTube videos that were  
15 briefly discussed in your cross-examination, do these YouTube  
16 videos that you know about, did they contain any proprietary  
17 information belonging to Cree?

18 A. No.

19 Q. And turning again to the question of harm to Cree, would  
20 you explain the harm Cree would have suffered if the Cree  
21 export controlled MMICs were exported to China?

22 A. I'm sorry. Could you repeat the question?

23 Q. Yes. I'll repeat that.

24 Would you explain -- let me start here. If the  
25 Cree -- if the MMICs that we're talking about --

1 MR. SPERTUS: Calls for speculation.

2 THE COURT: Just a minute.

3 Would you read the question, please.

4 (Record read)

5 THE COURT: Do you understand the question?

6 THE WITNESS: Yes.

7 MR. SPERTUS: Assumes facts not in evidence. It is  
8 speculative and assumes facts not in evidence.

9 THE COURT: I understand. Well, overruled.

10 Ladies and gentlemen, sometimes questions are asked  
11 that ask a witness to assume certain facts. The fact that  
12 they -- that doesn't mean that those assumed facts have been  
13 established.

14 Do you have the question in mind?

15 THE WITNESS: Yes.

16 THE COURT: You may answer.

17 THE WITNESS: So, one, I mean, if we have anything  
18 to do with that illegal export of that, essentially at that  
19 point in time if we do not have an export license, then we  
20 would have to immediately declare that to the government so  
21 that it could be properly investigated.

22 That can include penalties, substantial financial  
23 penalties, including stop a business. So it's very important  
24 for us to make sure that we comply with export law. The fact  
25 that those MMICs are getting delivered to China may enable

1       them to produce systems that they would not be able to  
2       produce without those MMICs.

3               That's a very serious impact, as well as, you know,  
4       they would see if they -- whoever designed those MMICs, they  
5       could see how they were designed, which is again intellectual  
6       property associated with those chips. So it could be very  
7       detrimental.

8       BY MS. HEINZ:

9       Q.     And could it result in loss of millions of dollars of  
10      business to Cree?

11             MR. SPERTUS: Your Honor, this is entirely  
12      speculative.

13             THE COURT: Sustained.

14      BY MS. HEINZ:

15      Q.     You just testified about the importance of export,  
16      following export regulations to Cree. Is there any  
17      relationship between Cree's need to follow export regulations  
18      and the priority they give that and Cree's financial bottom  
19      line?

20      A.     No. I mean, we will conduct business legally. If that  
21      means that we need to push out orders, we do that in order to  
22      make sure that we've got compliance, whether or not it be an  
23      export license or an assessment that has not been -- that the  
24      jurisdiction has not been determined yet what classification  
25      it is. We don't ship that material even if it in fact

1 impacts our revenue.

2 MS. HEINZ: No further questions.

3 THE COURT: Any recross?

4 MR. SPERTUS: Yes, Your Honor.

5 THE COURT: Briefly.

6 MR. SPERTUS: Within the scope.

7 **RECROSS-EXAMINATION**

8 BY MR. SPERTUS:

9 Q. With regard to your testimony about the undiced wafer  
10 and testing and the ability to see something from the PCMs  
11 that are on the undiced wafer, do you recall those questions  
12 on redirect?

13 A. Yes.

14 Q. Okay. If I were to put the undiced wafer that you sold  
15 to MicroEx in your hand, will you be able to look at it and  
16 determine whether any of those tests were done on that wafer?

17 MS. HEINZ: Objection. Relevance. Beyond the  
18 scope of the redirect.

19 THE COURT: You may answer.

20 THE WITNESS: These would have been tested at our  
21 site before we shipped them, so it would be very difficult to  
22 tell whether or not they had further tests done.

23 BY MR. SPERTUS:

24 Q. But on-wafer testing is visible by looking at the  
25 undiced wafer, right?

1 A. It can be.

2 Q. I mean, you can hold it up to the light and see if there  
3 were probes or anything inserted in it, right?

4 A. In some cases, yes. Not always. We've had customers  
5 actually bring to our attention, it doesn't look like you  
6 tested this wafer, because we did it in such a gentle manner  
7 that there were no probe marks.

8 So it doesn't always leave probe marks, but in fact  
9 the tests did occur.

10 Q. All right. So most MMIC testing involves destruction of  
11 the MMIC during the testing process?

12 A. Well, not at all. That would be very bad for business  
13 if every time you tested a device, it was destroyed. No. It  
14 sometimes leaves minor marks on the bond pads or the  
15 connection pads. But it can be very, very gentle also.

16 Q. Okay. And I guess the more skilled a tester you are,  
17 the more gentle you would be, right?

18 A. It could go both ways.

19 Q. Okay. But if I put that one undiced wafer that Cree  
20 sold to MicroEx that was the subject of your redirect  
21 testimony in your hand, will you be able to tell me whether  
22 or not that wafer poses some threat to Cree if that -- that  
23 you just testified could happen if the wafer went anywhere?

24 MS. HEINZ: Objection. Asked and answered.

25 THE COURT: Sustained. I don't understand the

1 question.

2 BY MR. SPERTUS:

3 Q. Well, okay. Without objection you heard you testified  
4 about some harm that could befall Cree by selling an undiced  
5 wafer. Do you recall that?

6 A. Yes.

7 Q. Okay. And you sold one undiced wafer to MicroEx, right?

8 A. That's what I recall.

9 Q. Okay. And the threats that you just testified result  
10 from certain types of testing activity, right?

11 A. Test and inspection, being able to see those wafers and  
12 see what's on them, yes.

13 Q. And if I put an undiced wafer in your hand, would you be  
14 able to tell me whether or not the testing on that undiced  
15 wafer happened? Yes or no?

16 MS. HEINZ: Objection. Asked and answered.

17 MR. SPERTUS: It's not been answered.

18 THE COURT: Do you understand the question?

19 THE WITNESS: Yes, I do.

20 THE COURT: You may answer. And you're not limited  
21 to yes or no.

22 THE WITNESS: Yes. And I can tell you that those  
23 structures would have been tested as part of the fabrication  
24 process before we shipped the wafers. The difficulty is  
25 determining whether or not they had been retested or further



1 tested.

2 BY MR. SPERTUS:

3 Q. But I'm talking about tested by somebody other than  
4 Cree. Do you understand that to be part of my question?

5 A. Yes. I understand that completely.

6 Q. Okay.

7 A. We would have tested it before we shipped it. If, you  
8 know, by luck the probes came back down in exactly the same  
9 spot and the same type of denting structure on it, then I  
10 would not have been able to tell if it had been retested  
11 after we tested it.

12 Q. Because somebody could have -- what do you mean by  
13 denting?

14 A. Well, when you come in with those probes and you apply  
15 pressure to make actual electrical contact between the probe  
16 tip and that pad, you're going to dent the gold, if you will.  
17 You scratch the gold surface, and you will leave a mark from  
18 that probe.

19 Q. Okay. And if I handed you the undiced wafer, will you  
20 be able to determine whether that testing was done?

21 MS. HEINZ: Asked and answered. Objection.

22 THE COURT: Yes. Sustained.

23 BY MR. SPERTUS:

24 Q. Now, with regard to the line of questioning that began  
25 your redirect, you were asked a series of questions about

1 customers try to create MMICs that meet designs. Do you  
2 recall that testimony?

3 A. Yes.

4 Q. Okay. And I think you said, well, customers can do very  
5 careful analysis before the wafers are made to try to realize  
6 their design goals. Is that what you meant to say?

7 MS. HEINZ: Objection. His testimony speaks for  
8 itself.

9 THE COURT: Sustained.

10 MR. SPERTUS: I'm asking is my summary accurate.

11 THE COURT: Sustained.

12 BY MR. SPERTUS:

13 Q. Is your point that when you were describing the careful  
14 analysis that customers can do before placing an order, is  
15 your point that careful analysis could be done to help the  
16 customer realize and performance the design goals?

17 MS. HEINZ: Objection. Relevance as to his point.

18 THE COURT: I don't understand the question.

19 Do you understand the question?

20 THE WITNESS: Yes.

21 THE COURT: You may answer.

22 THE WITNESS: I apologize. Could you please repeat  
23 the question.

24 THE COURT: Could you read the question, please.

25 (Record read)

1 THE WITNESS: Yes.

2 BY MR. SPERTUS:

3 Q. Yet you determined as a matter of fact in this case in  
4 the MicroEx production that the manufactured wafers did not  
5 in fact meet the design goals, right?

6 MS. HEINZ: Objection. Asked and answered. This  
7 is cumulative.

8 THE COURT: This is cumulative.

9 MR. SPERTUS: Addressing your redirect only --

10 THE COURT: We've covered the issues, all of the  
11 e-mails and so on. So let's move to a new area, please.

12 MR. SPERTUS:

13 BY MR. SPERTUS:

14 Q. Why does Cree bother offering testing services when it  
15 sells wafers?

16 MS. HEINZ: Objection. Relevance.

17 THE COURT: It's overbroad.

18 Next question, please.

19 BY MR. SPERTUS:

20 Q. Why are -- what are testing services offered by Cree?

21 A. These are on wafer tests in which we will test custom  
22 circuits, and that comes in conjunction with the fabrication  
23 lot. We would never actually just test circuits as a service  
24 alone. In other words, this is actually tied to actually  
25 where the customer has developed a custom chip. We put it on

1 a custom mask set.

2 THE COURT: Can you spell mask set?

3 THE WITNESS: M-a-s-k, space, s-e-t.

4 THE COURT: Thank you.

5 THE WITNESS: And when we do both the fabrication  
6 of those custom circuits, then we could do custom tests of  
7 those circuits.

8 BY MR. SPERTUS:

9 Q. And Cree charges money to do that, right?

10 A. That's correct.

11 Q. And if careful testing could help a customer accomplish  
12 its design goals, why does Cree offer a testing service?

13 MS. HEINZ: Objection. Relevance.

14 THE COURT: Sustained.

15 BY MR. SPERTUS:

16 Q. Didn't you just testify on redirect that careful  
17 analysis and modeling allows customers to realize their  
18 design goals? Isn't that the focus of the redirect that you  
19 just testified to?

20 MS. HEINZ: Objection. The testimony speaks for  
21 itself.

22 THE COURT: Sustained.

23 BY MR. SPERTUS:

24 Q. Can you -- so just tell me. Is it true that I can tell  
25 you the design, give you the design of a MMIC, and you could

1 tell me what the actual outputs were?

2 MS. HEINZ: Objection. His testimony speaks for  
3 itself.

4 THE COURT: Do you understand the question?

5 THE WITNESS: Yes.

6 THE COURT: You may answer.

7 THE WITNESS: So if you had just given me a MMIC,  
8 okay, I could look at it and make estimates of what its  
9 performance will be. Ultimately if you test that under a  
10 variety of conditions, you would know the performance of that  
11 chip under those conditions.

12 BY MR. SPERTUS:

13 Q. And you yourself in connection with the MicroEx wafers  
14 determined that your estimates based on the design did not  
15 match actual performance, correct?

16 A. They were very simple estimates. They was no analysis,  
17 no reverse engineering of that particular design circuit. So  
18 it's just a very simple estimate.

19 Q. And you were wrong?

20 A. No. I was quite reasonable.

21 Q. I'm not asking whether you were reasonable or  
22 unreasonable. I'm saying your predicted outputs were not  
23 actual outputs?

24 MS. HEINZ: Objection, Your Honor. This is  
25 cumulative. Asked and answered.

1 THE COURT: Agree. It's -- we've covered this  
2 already.

3 BY MR. SPERTUS:

4 Q. No dispute there's a lot of legitimate engineering tests  
5 to be done on on-wafer testing, right? You're not implying  
6 -- strike that. I'll ask another question.

7 You're not implying that when a customer asks for  
8 an undiced wafer to do on-wafer testing, there's anything  
9 wrong with that; are you?

10 A. No.

11 Q. When you were asked -- when you were just now testifying  
12 about the damages Cree could suffer, you were describing  
13 fines and penalties and things like that, right?

14 A. Yes.

15 Q. But you -- Cree suffered no damages related to anything  
16 connected to MicroEx in the category of fines or penalties,  
17 right?

18 MS. HEINZ: Objection. Calls for speculation.

19 THE COURT: Do you know? Do you understand the  
20 question?

21 THE WITNESS: Yes, I do.

22 THE COURT: All right.

23 Restate the question with a foundational basis.

24 BY MR. SPERTUS:

25 Q. Are you aware of any fine ever imposed on Cree for

1 anything that Cree did in connection with MicroEx in any  
2 manner?

3 A. No.

4 Q. Are you aware of any penalty imposed on Cree for  
5 anything Cree may have done ever in connection with its work  
6 for MicroEx?

7 A. No. We were not aware of any export that had taken  
8 place.

9 Q. What makes you think an export ever took place?

10 A. I don't.

11 Q. So when you described on redirect cutting off Mai's  
12 access immediately, what were you talking about?

13 A. If he was providing his user name access to another  
14 person, yes, we'd cut that off if someone does that. We  
15 gladly would give a legitimate user a user name and password  
16 to get access.

17 Q. Has MicroEx ever come back to you to ask for a run  
18 number three?

19 A. No.

20 Q. And the work on run number two was fully completed  
21 wafers delivered and paid for, right?

22 MS. HEINZ: Objection. This is cumulative.

23 THE COURT: It is. Sustained.

24 MR. SPERTUS: Your Honor, can I have a moment?

25 THE COURT: Yes.

1 (Pause in proceedings)

2 MR. SPERTUS: No further questions.

3 THE COURT: All right. Thank you, Mr. Spertus.

4 Just a moment. Let me talk to counsel for a  
5 moment, please.

6 (Begin sidebar conference)

7 THE COURT: Before I thank and excuse him, I want  
8 him to come back. I'd like to know whether you can agree on  
9 a process to ask him to return, please, at 2:40. By then the  
10 jurors will be gone.

11 MR. SPERTUS: I respectfully request that the Court  
12 not excuse him.

13 THE COURT: I am excusing him. I'm thanking him  
14 and excusing him. You have the ability to recall him. I'm  
15 talking about a mechanical issue here.

16 MR. SPERTUS: I misunderstood. Yes.

17 THE COURT: I want to advise him to return at 2:40.  
18 I don't want to do that in front of the jury.

19 MR. SPERTUS: I will follow him out and tell him.

20 THE COURT: Is that okay?

21 MS. HEINZ: Actually, if we're going to tell him  
22 that, I would prefer that Your Honor do it to --

23 THE COURT: I'm going to.

24 MS. HEINZ: No. I don't want you to do it in front  
25 of the jury.



1 THE COURT: We have to let the jury leave.

2 MR. SPERTUS: I'm happy to accept the  
3 responsibility.

4 MS. HEINZ: Then I would prefer that both of us  
5 tell him at the same time.

6 THE COURT: Tell him to come back at 2:40, please.

7 MS. HEINZ: Yes, Your Honor.

8 THE COURT: Thank you.

9 MR. SPERTUS: Thank you.

10 (End sidebar conference)

11 THE COURT: Mr. Barner, thank you for your  
12 testimony. You may step down at this time. We may be having  
13 you return at a later time to provide further testimony later  
14 in the case. Thank you.

15 THE WITNESS: Thank you.

16 THE COURT: The government will call the next  
17 witness, please.

18 MS. HEINZ: Your Honor, the government calls Kiet  
19 Mai.

20 **Kiet Mai, Government's witness, sworn**

21 THE CLERK: Please state your full name and spell  
22 it for the record.

23 THE WITNESS: My full name is Kiet --

24 THE COURT: Could you speak into the microphone,  
25 please.

1 Thank you.

2 THE WITNESS: Sorry. My name is Kiet Anh Mai.  
3 First name is K-i-e-t. Middle name is A-n-h. Last name is  
4 M-a-i.

5 THE COURT: Good afternoon, Mr. Mai.

6 THE WITNESS: Good afternoon, Your Honor.

7 THE COURT: Please proceed, Ms. Heinz.

8 MS. HEINZ: Thank you, Your Honor.

9 **DIRECT EXAMINATION**

10 BY MS. HEINZ:

11 Q. Mr. Mai, good afternoon.

12 A. Good afternoon, AUSA Heinz.

13 Q. Do you hold a degree in electrical engineering?

14 A. Yes.

15 Q. Please describe briefly your college education.

16 A. I have a bachelor of science in electrical engineering  
17 from the University of Hawaii and a master's degree in  
18 electrical engineering at California Institute of Technology.

19 Q. California Institute of Technology in Pasadena?

20 A. Yes.

21 Q. Could you please briefly describe your employment as an  
22 electrical engineer.

23 A. Well, I worked at Boeing company in Everett for one  
24 year. And then I came out to California in Los Angeles, and  
25 I worked for Hughes Aircraft company maybe two years. Then I

1 worked at, at that time called TRW, for another several  
2 years. Yes.

3 And then I worked -- and then Dr. Shih and I came  
4 out and established a company called MMCOMM, which is  
5 M-M-C-O-M-M, in 1997. And then in 2007 the company MMCOMM  
6 was bought by Honeywell International in Torrance. That's  
7 when we then went to work for Honeywell.

8 Q. Have you received any training in United States export  
9 regulations?

10 A. Yes, I did, for my -- for my company Honeywell via  
11 online training courses.

12 Q. And do you know a person by the name of Yi-Chi Shih?

13 A. Yes. Dr. Shih was my supervisor.

14 Q. And where was he your supervisor?

15 A. Well, he was my supervisor when we started out at  
16 MMCOMM. And then he was my supervisor when we worked for  
17 Honeywell.

18 Q. Do you see Yi-Chi Shih in the courtroom?

19 A. Yes.

20 Q. Could you please describe where he is sitting and what  
21 he is wearing.

22 A. Dr. Shih is sitting right there in the gray suit with, I  
23 think, brown tie and white shirt.

24 MS. HEINZ: Your Honor, may the record reflect that  
25 the witness has identified the defendant.

1 THE COURT: Yes.

2 BY MS. HEINZ:

3 Q. Mr. Mai, approximately how long have you known the  
4 defendant?

5 A. Well, probably around 12 years or a little more.

6 Q. Would you describe that relationship as a social one?

7 A. Practically I think it's more like professional than  
8 social.

9 Q. And you mentioned already, you testified that at MMCOMM  
10 he was your supervisor. What -- what did he supervise you  
11 doing?

12 A. Oh, actually we -- I was -- when we first started out, I  
13 mostly attended the reception desk. There's only two us.  
14 And I was doing engineering, which is basically a lot of  
15 testing and working with technicians to do assembly and  
16 tests, yeah.

17 Q. And at Honeywell what were you doing when he was your  
18 supervisor?

19 A. Well, I was tasked to do technical procurement and  
20 mostly testing.

21 Q. And what is MicroEx Engineering?

22 A. MicroEx Engineering is my company that I created to do  
23 the engineering for, you know, for -- I guess for jobs I get.

24 Q. How many employees does MicroEx Engineering have?

25 A. It is myself and my partner, Ed Lightner.

1 Q. Are there any other employees at MicroEx Engineering?

2 A. No.

3 Q. When you have worked with the defendant at MMCOMM, did  
4 you purchase MMIC power amplifiers for MMCOMM?

5 A. My recollection is very early on I might have, but  
6 eventually it was not my job to do the purchasing.

7 Eventually we had somebody else to do all that.

8 Q. And at Honeywell did you handle any purchasing of MMICs  
9 or other kinds of equipment?

10 A. Oh, yeah. Oh, yes.

11 Q. At Honeywell?

12 A. Yes.

13 Q. And then have you also purchased MMICs for the defendant  
14 through MicroEx?

15 A. MMICs, does it include wafers?

16 Q. Yes.

17 A. Yes, I did.

18 Q. I'd like you to look now at government's Exhibit 258.  
19 That is in Volume 3.

20 A. (Witness complies.) Yes, I have it here.

21 Q. Could you describe, looking at it, Exhibit 258, what it  
22 is?

23 A. This is an e-mail between myself and Dr. Shih.

24 MS. HEINZ: Your Honor, move to admit Exhibit 258.

25 THE COURT: Any objection?

1 MR. SPERTUS: No, Your Honor.

2 THE COURT: Thank you.

3 Exhibit 258 is admitted.

4 **(Exhibit 258 received.)**

5 MS. HEINZ: Could we go down to the bottom of the  
6 e-mail and publish.

7 THE WITNESS: Yes.

8 THE COURT: Page?

9 MS. HEINZ: That would be page 3, which would be  
10 the numbers ending in 8636.

11 THE WITNESS: Okay. Yes.

12 BY MS. HEINZ:

13 Q. So, Mr. Mai, you can either use the binder or look at  
14 the screen.

15 A. Yes.

16 Q. Looking at the scene, this is an e-mail?

17 A. Yes.

18 Q. And the subject of it says TGA2572. Do you see that?

19 A. Yes.

20 Q. And this e-mail is signed by Ed Lightner. Do you see  
21 that?

22 A. Yes.

23 Q. Who wrote this e-mail?

24 A. I did.

25 Q. And why is it signed Ed Lightner?

1 A. Oh, because I was trying to ask about this particular  
2 MMIC from Jane, whom I know because I would buy MMICs from  
3 her for my company Honeywell. And I didn't want them to, you  
4 know, to let her know that I also have a company on the side.

5 Q. So when you're corresponding with Jane in this e-mail,  
6 you're not working for Honeywell? You're not working in your  
7 capacity for Honeywell?

8 A. No. This particular one was for MicroEx.

9 Q. Okay. I'd like to turn your attention to the next -- to  
10 the previous page, which is page 2, which ends in 8635.

11 A. Yes.

12 Q. And I'm looking at the bottom e-mail there.

13 A. Yes.

14 Q. So did you receive that response from Jane at RFMW?

15 A. Yes.

16 Q. What is RFMW?

17 A. It's a distributor for many companies selling MMICs.

18 Q. So I'd like to direct your attention to the next e-mail  
19 in this chain, which is dated February 3rd, 2012?

20 A. Yes.

21 Q. Now, there's an address there on Hill Street?

22 A. Yes.

23 Q. Can you tell us what was actually at that address?

24 A. Oh, that is my art gallery. The address is for my art  
25 gallery.

1 Q. And did you use that address as the address for MicroEx  
2 Engineering?

3 A. Yes, I did.

4 Q. I'd like to look at the next e-mail which is at the  
5 first page which ends with 8634.

6 A. Yes.

7 Q. And did you receive this e-mail even though it's  
8 addressed to Ed?

9 A. Yes.

10 Q. And then I'd like to turn now to the top two e-mails.  
11 So looking at the e-mail that's dated February 3rd, 2012, do  
12 you see that?

13 A. Yes.

14 Q. That is an e-mail that's to you; is that correct?

15 A. Let me see. You're talking about 2/3/12 at 9:22 -- I'm  
16 sorry, 9:24 p.m.? Is that what you're referring to?

17 Q. No. I'm going down below there.

18 MS. HEINZ: Actually if you can highlight a little  
19 bit more. I mean, if you could show a little bit more of the  
20 e-mail down there which include where it says forwarded  
21 message.

22 THE WITNESS: Okay. Let me see.

23 MS. HEINZ: Go up a little more.

24 THE COURT: You can also circle that on the screen.

25 MS. HEINZ: The problem is there isn't enough on my



1 screen.

2 THE WITNESS: Oh, yes.

3 BY MS. HEINZ:

4 Q. I didn't circle that very well, but I want to direct  
5 your attention to where it says forwarded message. Do you  
6 see that?

7 A. Yes. Yes.

8 Q. So did you forward this e-mail to the defendant, the  
9 e-mail where it says: Hi, Ed?

10 A. Let me see. To -- from Jane. Let me think...

11 Q. I'm specifically directing your attention to where it  
12 says Saturday, February 4 --

13 A. Oh, yes. I'm sorry. The line above that. Yes. Yes, I  
14 did.

15 Q. And then do you see above where it says: Please send me  
16 the spec and application notes?

17 A. Yes. Yes.

18 Q. And what is a spec and application note?

19 A. Basically when you buy a MMIC, they will provide you the  
20 specifications for the performance of the device, of the  
21 MMIC. And the other one is notes. Application notes  
22 basically would show you how to use it pretty much, how to  
23 basically, you know, make it to work for this, for it to  
24 perform like it is supposed to.

25 Q. And then looking at the top e-mail?

1 A. Yes.

2 Q. Do you see that?

3 A. Yes.

4 Q. All right. So that says, Yi-Chi, this part is ITAR. Do  
5 you see that?

6 A. Yes.

7 Q. And it says: TriQuint wants to review declaration. Do  
8 you see that?

9 A. Yes.

10 Q. What did you understand or what did you mean by the term  
11 ITAR?

12 A. Oh, basically when -- ITAR means export control part.  
13 So therefore, you -- when you buy it, they want to know if  
14 you're going to export it and who will be the end user.

15 Q. And where you say TriQuint wants to review the  
16 declaration, what did you mean by that?

17 A. Oh, before they actually sell it to you, they will send  
18 you a form and you have to declare whether or not you're  
19 going to export the part or who will be the end user.

20 Q. And then in the next sentence you say: See if someone  
21 can get a sample because I have to ask Ed to do it, and I'm  
22 not quite sure yet.

23 What did you mean by that when you said: Because I  
24 have to ask Ed to do it and I'm not quite sure?

25 A. Well, basically I didn't really want to do it, so it's

1 my way of -- my way of saying I don't really want to do it  
2 but, you know, kind of a nice way of saying so.

3 Q. Directing your attention to government's Exhibit 259.

4 A. Okay.

5 Q. What is government's Exhibit 259?

6 A. The first page -- yeah, the first page is -- it's the  
7 e-mail from Dr. Shih to me. So it basically is the -- yeah,  
8 from Dr. Shih to me, and then from me to Dr. Shih.

9 MS. HEINZ: Your Honor, I think one of the jurors  
10 is trying to get your attention.

11 THE COURT: Do you need a break? Sure. We'll stop  
12 here for a moment.

13 MS. HEINZ: Yes.

14 THE COURT: Well, can we break for ten minutes?  
15 Let's break for ten minutes and then we'll resume. Please  
16 don't discuss the case during the break.

17 Sorry I didn't see you originally.

18 THE CLERK: All rise.

19 (Open court - jury not present)

20 THE COURT: Please be seated. We'll resume in  
21 about ten minutes.

22 You may step down, Mr. Mai, if you wish. Also,  
23 Mr. Mai, there are times when you're so close to the  
24 microphone that it's making it a little loud. So if you  
25 could just be a couple of inches away.

1 THE WITNESS: Thank you, Your Honor.

2 (Recess taken from 1:02 p.m. until 1:16 p.m.)

3 MR. SPERTUS: Your Honor, one thing before I  
4 forget. Before the jury comes out, I do have a pending  
5 motion to move -- I have a pending motion to move in the  
6 series of exhibits I identified when Dr. Barner was on the  
7 stand.

8 THE COURT: No. I understand. By the way, would  
9 you let me know -- it's been a day or two. There's a  
10 reference to the search warrant that was executed in this  
11 case, and there was testimony about a judge signing the  
12 warrant. Do you recall that?

13 MS. HEINZ: Vaguely, although I don't remember.

14 MS. SARTORIS: I do remember that.

15 MR. SPERTUS: I remember that. Agent Miller  
16 mentioned it.

17 THE COURT: Are they ready?

18 (Court and clerk conferring)

19 THE COURT: The juror who asked for the break is  
20 still not quite feeling well, so I want to have Ms. Kiefer  
21 communicate to the juror that we don't want to rush her. We  
22 want her to be feeling right. So we'll just wait.

23 Okay. The question that I have for you is whether  
24 in light of that testimony, you think I should instruct the  
25 jury that the judge -- that I'm not the judge who signed the

1 search warrant.

2 MR. SPERTUS: I do not think so, no.

3 THE COURT: That's fine.

4 MS. SARTORIS: Your Honor, I would support if  
5 there's any corrective instruction that you think is  
6 appropriate, especially if defense -- I would defer to the  
7 Court and the defense.

8 THE COURT: No. I just wanted to make sure.

9 Second question. There was some testimony today  
10 concerning Exhibit 3566, which is the contract.

11 MR. SPERTUS: Yes, Your Honor.

12 THE COURT: Do you recall that? And there was some  
13 questions about what the contract means. Do you recall that?

14 MR. SPERTUS: I don't think that's what the  
15 question was, but I remember the subject matter of the  
16 Court's testimony. He said his lawyers drafted it.

17 THE COURT: Not -- I didn't testify.

18 MR. SPERTUS: I meant Dr. Barner, of course.

19 THE COURT: I wanted to make sure you confer about  
20 this. It's not about the testimony. It's just that to the  
21 extent there's a dispute about what a contract means, that's  
22 generally not an issue for the jury. It's an issue for the  
23 Court.

24 MR. SPERTUS: I disagree that that instruction  
25 should be given, and I don't think that that's the law in

1 this case. This is not a contract interpretation case.

2 THE COURT: I'm just -- I didn't say that -- that  
3 wasn't what I said. What I said is there was testimony  
4 elicited concerning the contract and its words. So let's  
5 just leave it at that. I'm just asking -- I'm not making any  
6 determination except that the issue is whether anything more  
7 needs -- anything needs to be done eventually in the manner  
8 concerning interpreting the contract.

9 MR. SPERTUS: I do not think anything more needs to  
10 be done.

11 THE COURT: That's fine.

12 Do you agree? And I don't need to resolve this  
13 right now. I'm raising issues because the jury is not here  
14 yet.

15 MS. SARTORIS: Your Honor, I would like to, if I  
16 could, go back to the reference to the judge signing a search  
17 warrant, during any discussion along those lines. I just  
18 want to make sure that there isn't a corrective instruction  
19 that defense counsel would want to hear with respect to that.  
20 If there's anything --

21 THE COURT: If I said anything, I would simply say  
22 there's been testimony concerning a search warrant in this  
23 case and that it was signed by a bench officer and I'm not  
24 the bench officer who signed it.

25 MS. SARTORIS: I just want to hear from defense

1 counsel if they have any corrective instructions that they  
2 would like along those lines or if they prefer not to.

3 MR. SPERTUS: No, Your Honor. The answer is no.

4 THE COURT: That's what I heard you say before.

5 MS. SARTORIS: Okay. Thank you, Your Honor.

6 THE COURT: By asking the question, I'm not  
7 proposing it. I'm just raising the question.

8 (Court and clerk conferring)

9 THE COURT: We're having this discussion concerning  
10 juror number 15. My latest information is she still hasn't  
11 -- she's not feeling a hundred percent yet. So I suggest we  
12 stop for another ten minutes here rather than all of us  
13 sitting here waiting.

14 If at the end of ten minutes she feels up to  
15 proceeding, we'll proceed. If she doesn't, we'll start again  
16 tomorrow. I wonder, though, if we do that, during the break  
17 can you find out if -- well, it's not essential -- if  
18 Mr. Barner could come back earlier. Do we know where he is?

19 MS. HEINZ: We could check in the back of the  
20 courtroom, Your Honor, and find out if he's back there.

21 MS. SARTORIS: Your Honor, I just on this last  
22 break spoke to somebody who was inquiring if he could perhaps  
23 go down to the cafeteria and get some food. I said that I  
24 thought that would be fine and that we wouldn't need him back  
25 until 2:00. So I believe we could probably find him if --

1 THE COURT: We can obviously --

2 MR. SPERTUS: Your Honor, on that issue, the thing  
3 that I just am -- that I don't understand is that he'll then  
4 come back for literally 15 minutes of testimony to  
5 authenticate these wafers and --

6 THE COURT: I don't know what else you had in mind  
7 in terms cross-examination, but I've already ruled on what  
8 I'm going to do here.

9 MR. SPERTUS: Thank you. I understand. He just  
10 seemed very upset to learn that, and I would just like the  
11 Court to inform the witness that that was the Court's  
12 decision or whatever.

13 THE COURT: I didn't interpret his reaction to my  
14 question about whether he's available week after next as  
15 anything more than, yes, I would be available. Also I didn't  
16 understand that you had in mind testimony by him if you were  
17 to recall him, that would be limited to 15 minutes. I didn't  
18 know that.

19 MR. SPERTUS: It might be slightly longer, but  
20 basically it was the testimony surrounding the wafers. So  
21 however long that takes.

22 THE COURT: Okay. I understand. All right.

23 Let's resume in ten minutes. And if -- we'll  
24 resume in ten minutes. Thank you.

25 (Recess taken from 1:23 p.m. until 1:37 p.m.)



1 THE COURT: We're back on the record. All counsel  
2 and parties are here. No jurors are present. Ms. Kiefer  
3 reports that juror 15 is still not feeling well, and I think  
4 it's better for us to have us resume tomorrow morning. I  
5 don't want to lose the juror, and I don't want her to be here  
6 if she can't focus, or risk any health issues. So I'm going  
7 to excuse the jurors.

8 I think, unless you want me to bring the jurors  
9 back into the courtroom for me to tell them they're excused  
10 until tomorrow, I would have Ms. Kiefer just tell them.

11 MR. SPERTUS: No objection to Ms. Kiefer telling  
12 them, Your Honor.

13 MS. HEINZ: No objection, Your Honor.

14 MS. SARTORIS: No objection, Your Honor.

15 THE COURT: All right. Let's do that. Thank you.  
16 So we'll resume tomorrow at 8:30.

17 And with respect to Mr. Barner, have we located  
18 him?

19 MS. SARTORIS: Your Honor, I think he might be  
20 here. I know if he is not directly outside, he is not very  
21 far. So we can get him up here in a couple minutes.

22 THE COURT: That's fine.

23 Mr. Mai, we'll be resuming tomorrow at 8:30.  
24 You're excused for the day. Thank you.

25 MS. SARTORIS: I apologize, Your Honor. I told him

1 he could be gone and be back at 2:00.

2 THE COURT: No one has done anything wrong. I'm --  
3 I mean, from my point of view, I'm here anyway. I'm trying  
4 to do this so that all of you can leave.

5 MR. SPERTUS: Before Dr. Barner comes, can I just  
6 get clarity on what we're doing with him?

7 THE COURT: Yes. My plan is this. Because, as  
8 I've said, I plan to have a hearing next week on the issues  
9 that we've discussed concerning the wafers that have been  
10 marked as exhibits, and one of the issues that is presented  
11 is whether these are wafers produced by Cree.

12 If these are among the wafers that were -- wafers  
13 produced by Cree among those that were produced pursuant to  
14 the agreement with -- that has been discussed in this case --

15 MR. SPERTUS: Yes.

16 THE COURT: -- I thought that we can hear his  
17 testimony on that. I didn't have in mind an extensive amount  
18 of testimony frankly. Just I think it would add in to the  
19 testimony from your legal assistant and from the government's  
20 witness as to the chain -- what I'm calling the  
21 chain-of-custody issues and where the -- well, that sort of  
22 thing.

23 MR. SPERTUS: So I understand, and that's, I think,  
24 going to be very useful. The additional thing that would be  
25 useful would be -- the prosecutors have said these materials,

1 these wafers do not appear to be the same. I think what  
2 they're saying is some MMICs are removed for testing. So the  
3 witness obviously is going to say that other than removed  
4 MMICs which were tested, these are the same. If Barner says  
5 that, I'd say that's useful testimony to have.

6 THE COURT: Does the government have any --

7 MR. SHOBAKI: Your Honor, I think certainly if  
8 Dr. Barner inspects the wafers that the defense has brought  
9 to court, he can make that assessment as to whether he thinks  
10 they look like genuine Cree wafers that were produced  
11 pursuant to the transactions.

12 He can also opine as to whether they appear to be  
13 in the state that they would have been when they left Cree or  
14 not, which really addresses what Mr. Spertus is raising,  
15 which is the question of whether and what has been removed,  
16 if anything, from the wafers.

17 MR. SPERTUS: Your Honor, we stipulate that MMICs  
18 were removed for testing.

19 THE COURT: I understand.

20 MR. SPERTUS: Right.

21 THE COURT: The reason that I'm going this, as I  
22 said, is he won't be here next week. Other people will be  
23 here next week. While he's here, why don't we spend the five  
24 minutes we need with him just to get some very basic  
25 information.

1           For example, I don't know. If we show him these --  
2           if we show him the exhibits, will he be able by a physical  
3           examination on the witness stand to answer detailed questions  
4           concerning are these exactly the same condition as before.  
5           I don't know the answer to that.

6           MR. SPERTUS: First of all, I have the packing  
7           slips. He'll match the serial numbers, I anticipate, because  
8           that's -- that matters. He's not testing his memory. But I  
9           can, I think, put him on a direct that I would consider a  
10          sufficient foundation. Then the government could ask  
11          whatever it wants.

12          THE COURT: What I'm saying is I don't know whether  
13          he's going to be -- what questions he'll be able to answer.  
14          This is not a -- I'm really -- it's a very focused, narrow  
15          area.

16          MR. SPERTUS: Right.

17          THE COURT: Because the issue is your disagreement  
18          about whether these should be admitted. Putting aside the  
19          government's position that they should be excluded on the  
20          discovery grounds, I'm focused on are these the same units.

21          MR. SHOBAKI: Your Honor, understood, and  
22          understood with that narrow scope as to the Rule 16 issues.  
23          Now with these new wafers that we haven't ever actually seen,  
24          we've just seen that filing last night that said that they  
25          would appear in court.

1 THE COURT: What about that? There are other  
2 wafers?

3 MR. SPERTUS: So we forfeited the cross in our  
4 opinion of Alex Storino in order to present these wafers from  
5 Canada to the witness today. The Court didn't allow us. I  
6 wish we hadn't filed it. But the three attachments to our  
7 brief, one is that when Dr. Shih was released from custody  
8 and went home, he called us and said the FBI didn't take the  
9 wafers, and we've given the Court that --

10 THE COURT: I --

11 MR. SPERTUS: Right. The same exact error that  
12 happened with Agent Miller happened with the Canadian Mounted  
13 Police. That is what I think counsel is receiving to. So  
14 the RCMP took one wafer and left three back, and my paralegal  
15 went and picked them up.

16 THE COURT: In Montreal?

17 MR. SPERTUS: Yes. So those are the two -- that's  
18 what we briefed. And Alex Storino, I believe, would have  
19 been cross-examined in the exact manner of Agent Miller, but  
20 we decided as a strategic matter that it's more important to  
21 show the wafers to Dr. Barner.

22 MR. SHOBAKI: Your Honor, may I be heard very  
23 briefly on that?

24 THE COURT: Yes.

25 MR. SHOBAKI: First of all, last night's filing was

1 the first time that there has been any -- and this is again  
2 understanding that this would be relevant to the Rule 16  
3 determination. Last night's filing was the first time ever  
4 that we've had any information about these wafers that were  
5 supposedly retrieved from JYS Technology in Canada.

6 Mr. Spertus's assertions about cross-examination of  
7 Special Agent Storino, I don't know what the basis is for  
8 that, given that Special Agent Storino was in Los Angeles on  
9 the day the search happened in Canada.

10 So what purported impeachment would happen, I don't  
11 know. The bottom line, Your Honor, is these are -- I don't  
12 know how many. I think they said three more wafers that  
13 never before seen, never before disclosed, including  
14 investigative reports about them dating back more than a year  
15 from this date or approximately a year. That again, you  
16 know, that will be part of the Rule 16 conversation.

17 For the purposes of what these things are, to the  
18 extent that Dr. Barner is able to, from looking at them and  
19 perhaps from looking at the documents related to them, able  
20 to make some assessment about what he thinks they are, you  
21 know, that is certainly something he could do today. And I  
22 understand that is something the Court is interested in  
23 knowing about.

24 THE COURT: Well, are the wafers -- are the wafers  
25 that you say were retrieved from Montreal, are those here

1 today?

2 MR. SPERTUS: Yes. We would have shown them to  
3 Dr. Barner.

4 THE COURT: Okay.

5 MR. SPERTUS: But, Your Honor, the one thing I want  
6 to correct, first of all, this is not the first the  
7 government has heard about it. I talked about it in opening  
8 statement where these were located. So, one. Two, we filed  
9 in camera the defense, you know, just so the Court wouldn't  
10 be surprised.

11 Our goal is not to have the Court surprised by  
12 anything, but cross-examination material by definition is not  
13 shared with the government.

14 THE COURT: I understand. Well, okay. You know  
15 what? I think maybe we should -- here he is. Do we have  
16 those exhibits?

17 MS. SARTORIS: I saw him walk in. Should I grab  
18 him?

19 THE COURT: Yes, please. I think he's coming in.  
20 Could you come forward, please, sir. Please be  
21 seated.

22 Would you please restate your name.

23 THE WITNESS: Jeffrey Brian Barner.

24 THE COURT: Mr. Barner, you understand you remain  
25 under oath?

1 THE WITNESS: Yes.

2 **Jeffrey Brian Barner, Government's witness, previously sworn**

3 THE COURT: Thank you for coming back. I know this  
4 is earlier than we had stated.

5 First we're going to ask you some questions outside  
6 the presence of the jury. And just as a -- in the event that  
7 you are recalled as a witness when the jury is present, I  
8 just want to start by saying unless instructed otherwise, you  
9 shouldn't be, in response to questions at that time,  
10 disclosing that there was this separate hearing.

11 THE WITNESS: Understood.

12 THE COURT: Okay.

13 Do we have -- what are the exhibit numbers, please?

14 MR. SPERTUS: Your Honor, the exhibits are  
15 Exhibit 1, and the box 3996, the box 4270, Exhibit 3638,  
16 which is a wafer.

17 THE COURT: It's these three wafers, correct?

18 MR. SPERTUS: Plus the container and two other  
19 boxes.

20 MR. SHOBAKI: Your Honor, I don't believe that it's  
21 appropriate to ask Dr. Barner about the boxes. We've been  
22 talking about the wafers.

23 THE COURT: Yeah, I want to ask him about the  
24 wafers.

25 MR. SPERTUS: But he's going to also authenticate



1 the boxes as chief of the foundry.

2 MR. SHOBAKI: Your Honor, that assertion is pretty  
3 much what -- I don't even need to explain why it makes no  
4 sense.

5 THE COURT: Could you take those out, please.

6 I'll do the questioning for now. Please be seated.  
7 If counsel want to approach to see and of the exhibit  
8 numbers, you may.

9 Dr. Barner, in front of you is a container which  
10 has within it three separate items. Do you see that?

11 THE WITNESS: Yes, I do.

12 THE COURT: Could you remove the first of those,  
13 the one that's closest to you, please.

14 THE WITNESS: (Witness complies.)

15 THE COURT: And you'll see on that -- Mr. Spertus,  
16 if you want to approach, you may, too. You're not required  
17 to.

18 Do you see a number on there, 3638 perhaps?

19 THE WITNESS: I have 3640.

20 THE COURT: That's fine. That's 3640. And then?

21 THE WITNESS: 3639 and 3638.

22 THE COURT: Okay. Just starting with 3640, which  
23 is the one in your hand, do you recognize that or think you  
24 recognize it?

25 THE WITNESS: Yes.

1 THE COURT: What is it?

2 THE WITNESS: It is a process wafer which is on  
3 dicing tape, a Nitto brand dicing tape. It is diced. There  
4 are a variety of devices removed that primarily appear to be  
5 harvested out of the PCM area, which is the devices  
6 potentially we would have harvested before.

7 THE COURT: Okay. Stop there. Hang on. Do you  
8 recognize Exhibit 3640 as a wafer that was produced by Cree?

9 THE WITNESS: This does appear to be a wafer that  
10 was produced by Cree.

11 THE COURT: And by examining it -- and if you need  
12 to open the case, let me know, but don't open it -- can you  
13 tell when it was produced?

14 THE WITNESS: I could not tell from this when it  
15 was produced. I would have to look at the manufacturing  
16 records back at the factory.

17 MR. SPERTUS: I can project on the monitor the  
18 packing --

19 THE COURT: That's fine. Go ahead. Just a moment.

20 And is the same -- Mr. Barner, is the same true  
21 of -- there are two others. One is 3639. Could you look at  
22 those?

23 THE WITNESS: Yes.

24 THE COURT: Is that 3639 in your hand?

25 THE WITNESS: This is 3638 in my hand.

1 THE COURT: 3638, what is that?

2 THE WITNESS: It appears to be a Cree-manufactured  
3 wafer.

4 THE COURT: Okay. And 3639?

5 THE WITNESS: Again appears to be a  
6 Cree-manufactured wafer.

7 THE COURT: And you said you could --

8 THE WITNESS: But --

9 THE COURT: I'm sorry. Go ahead.

10 THE WITNESS: -- there are no chips left on this  
11 wafer at all --

12 THE COURT: Okay.

13 THE WITNESS: -- it appears.

14 MR. SPERTUS: I do have the other three.

15 THE COURT: Just a minute.

16 Do you have the -- what is the -- was the packing  
17 material marked as an exhibit?

18 MR. SPERTUS: Yes, Your Honor.

19 THE COURT: What's the exhibit number, please?

20 MR. SPERTUS: It's 36 -- I'm sorry, 3996-A, B, and  
21 also the box is 3996.

22 MR. SHOBAKI: Your Honor -- you're referring to the  
23 slips that show the serial numbers and the PCM for the  
24 wafers?

25 THE COURT: Yes, I am.

1 MR. SPERTUS: No, no, no. That's 753. I'm going  
2 to project that. That's in evidence.

3 THE COURT: No. I don't want those. I want 743,  
4 just --

5 MR. SPERTUS: 743 is the packing slip.

6 MR. SHOBAKI: Your Honor, that's admitted into  
7 evidence. 743 is the December 26, 2013, Cree packing slip  
8 which I believe also includes the wafer serial numbers.

9 THE COURT: One page, correct?

10 MR. SPERTUS: Yes, Your Honor. I displayed on the  
11 monitor the serial numbers.

12 THE COURT: Please don't do that. Just show him  
13 the exhibit. Is it a one-page exhibit?

14 MR. SPERTUS: One page, yes.

15 THE WITNESS: I can see it.

16 THE COURT: The book next to you, Exhibit 743.  
17 It's in Volume 9. Do you see that?

18 THE WITNESS: Yes. Uh-huh.

19 THE COURT: Do you recognize Exhibit 743?

20 THE WITNESS: Yes, I do. This is our packing slip  
21 that was for the shipment from the 93-B2 project.

22 THE COURT: If you compare -- in looking at  
23 Exhibit 743 together with Exhibits 3638, 3639, and 3640, are  
24 you able to determine whether they correspond?

25 THE WITNESS: So --

1 MR. SPERTUS: Your Honor, if I can -- we have a  
2 second packing slip.

3 THE COURT: Just a minute.

4 THE WITNESS: -- 3638 is part of this packing slip.

5 THE COURT: Yes.

6 THE WITNESS: 3639 is part of this packing slip.

7 THE COURT: Okay.

8 THE WITNESS: And 3640 is not part of this packing  
9 slip.

10 MR. SPERTUS: Your Honor, could I display the  
11 second --

12 THE COURT: Would you wait a second, please. If  
13 you could just let me...

14 How are you able to tell that 3638 corresponds to  
15 the 1 of 2 Exhibit 743?

16 THE WITNESS: Because of the wafer ID that is  
17 labeled on the barcode that we place on the diced wafer.

18 THE COURT: And which -- are you referring to the  
19 IDs as the ones that begin with letters under specification  
20 of commodities?

21 THE WITNESS: That's correct. Our basic numbering  
22 scheme is the first two letters refer to the crystal growth  
23 tool that the crystal silicon carbide is grown from. The  
24 next four digits are the number of boules grown in that tool.  
25 And the dash number 20 is the slice that was taken out of

1 that crystal boule and polished, and then eventually Gallium  
2 Nitride was grown on it. And then eventually it was  
3 processed into this wafer.

4 THE COURT: When you said dash number 20, are you  
5 referring to 12 or 24 or 03 or something else?

6 THE WITNESS: So in 3640, the exhibit, explicitly  
7 it is JE0628-20.

8 THE COURT: To which of the three numbers in the  
9 specification of commodities does that exhibit correspond, if  
10 you know?

11 THE WITNESS: I'm sorry?

12 THE COURT: In Exhibit 743 under specification of  
13 commodities, do you see that?

14 THE WITNESS: Yes.

15 THE COURT: It says -- it says four GaN MMIC  
16 wafers. Do you see that?

17 THE WITNESS: I do.

18 THE COURT: And below that it says three wafers  
19 diced?

20 THE WITNESS: Yes, and one undiced wafer. So on  
21 that --

22 THE COURT: My question is whether -- does BE refer  
23 to a wafer?

24 THE WITNESS: BE alone does not refer to a wafer.

25 THE COURT: Does HG refer to one?

1 THE WITNESS: No.

2 THE COURT: Does LS refer to one?

3 THE WITNESS: Not by itself, no. I mean, the  
4 entire string of numbers and dash numbers refer to a wafer.

5 THE COURT: But there are three wafers?

6 THE WITNESS: There are three diced wafers.

7 THE COURT: How does Exhibit 743 correspond to each  
8 of 3638, 3639, and 3640? How are you able to make that  
9 connection?

10 THE WITNESS: I am making that connection from the  
11 wafer ID that is on the label in the exhibit and listed on  
12 the packing slip.

13 THE COURT: By exhibit, you're referring to 3638?

14 THE WITNESS: 3638, 3639, and 3640.

15 THE COURT: And the number on 3638, how do you know  
16 that corresponds to what's on Exhibit 743?

17 THE WITNESS: Which item?

18 THE COURT: 3638.

19 THE WITNESS: So 3638, this is wafer LS0125-03.

20 THE COURT: I see. So that does correspond to one  
21 of the numbers here under specification of commodities in  
22 Exhibit 743; is that correct?

23 THE WITNESS: That is correct.

24 THE COURT: And then the second wafer you said that  
25 you think is identified on Exhibit 743 is Exhibit 3639; is

1 that right?

2 THE WITNESS: That is correct.

3 THE COURT: And does that correspond to either the  
4 BE or the HG number?

5 THE WITNESS: It is the HG070124.

6 THE COURT: Okay. Thank you.

7 Now, Mr. Spertus, did you say you have another  
8 packing slip?

9 MR. SPERTUS: Yes, Your Honor.

10 THE COURT: Do you think it corresponds to  
11 Exhibit 3640? What's the exhibit number?

12 MR. SPERTUS: 3120.

13 THE COURT: Has that been published before?

14 MR. SPERTUS: I don't know.

15 THE COURT: All right. Thank you.

16 Just a minute. If you could --

17 MR. SPERTUS: It was produced by the government but  
18 not on their exhibit list.

19 THE COURT: Exhibit 3120 is a defense exhibit.

20 MR. SPERTUS: Yes. It was produced by the  
21 government but not included on their exhibit list.

22 THE COURT: Does the government have a copy of  
23 3120?

24 MR. SHOBAKI: Not with us, Your Honor, but --

25 MR. SPERTUS: I'll give them one.



1 MR. SHOBAKI: -- I'll be happy to take a look.

2 THE COURT: Okay. Thanks.

3 Mr. Barner, if you could turn to the other set of  
4 books, Volume 2.

5 If you would turn to tab 3120, please.

6 THE WITNESS: (Witness complies.) All right. I  
7 have that.

8 THE COURT: Does the exhibit you have there which  
9 has been marked as 3640 correspond to any of the four numbers  
10 in the specification of commodities box in Exhibit 3120?

11 THE WITNESS: Are you asking me if any of these on  
12 this packing slip are here?

13 THE COURT: Well, I'm -- specifically Exhibit 3640.

14 THE WITNESS: 3640 is in fact listed on this  
15 packing slip.

16 THE COURT: And which of the four numbers is it?

17 THE WITNESS: It is JE0628-20.

18 THE COURT: And you're able to tell that because  
19 there is a number on the wafer?

20 THE WITNESS: It is not physically on the wafer.  
21 It is on the barcode that's attached to the wafer that is  
22 attached to the dicing tape and in the ring in this  
23 clamshell.

24 THE COURT: May I see that, please.

25 THE WITNESS: Sure.

1 THE COURT: So I'm clear, the barcode to which  
2 you're referring is attached to the wafer; is that right?

3 THE WITNESS: It is not actually touching the  
4 wafer. It's touching the tape that the wafer is mounted on.  
5 It's sitting beside it.

6 THE COURT: Okay. Let me ask you this. With  
7 respect to the three wafers that you have there -- Exhibits  
8 3638, 3639, and 3640 -- as you sit here today and look at  
9 them, are you able to -- can you determine -- I've asked you  
10 this already, but just to be clear, are you able to determine  
11 whether those were produced by Cree?

12 THE WITNESS: Yes.

13 THE COURT: And are they? Were they?

14 THE WITNESS: They appear to be so, yes.

15 THE COURT: And as you sit here today, do you know  
16 whether these three wafers -- 3638, 3639, and 3640 -- were  
17 shipped by Cree to MicroEx?

18 THE WITNESS: Yes, they were.

19 THE COURT: Okay. What are the other wafers that  
20 you have?

21 MR. SPERTUS: So there's Exhibit 1, which is --  
22 should also be -- was one of the four wafers of run one.  
23 Then I have the three --

24 THE COURT: Excuse me. Exhibit 1?

25 MR. SPERTUS: Exhibit 1 is a government exhibit

1 which is from run one matching the packing slip 743. He  
2 should be shown Exhibit 1.

3 THE COURT: But is that disputed? Exhibit 1 was  
4 produced by --

5 MR. SHOBAKI: It's not disputed, Your Honor. In  
6 fact, Exhibit 1 was sent to Cree and Cree examined it.  
7 That's the wafer that went to Cree.

8 MR. SPERTUS: I'm identifying all the wafers.

9 THE COURT: I don't think that's an issue.

10 MR. SPERTUS: Okay.

11 THE COURT: That's not the issue. Is there any  
12 other wafers that --

13 MR. SPERTUS: Yes, there's three additional ones.  
14 One -- I will identify them for the record as Exhibits 3641,  
15 which is a run-one wafer; 3642, which is a run-two wafer; and  
16 3643, which is also a run-two wafer.

17 THE COURT: Okay. Those three exhibits will be  
18 marked for identification. Would you show them to the  
19 government, please, if the government hasn't seen them yet.

20 MR. SPERTUS: Will the Court be needing me to  
21 display any packing slips?

22 THE COURT: Is there a packing slip associated with  
23 these three, Exhibits 3641, 3642, and 3643?

24 MR. SPERTUS: Yes. There's one packing slip for  
25 run one and another packing slip for run two. All six of

1 these wafers are on those two packing slips.

2 THE COURT: What's the -- are those marked as  
3 exhibits?

4 MR. SPERTUS: So the same exhibits that have been  
5 displayed, when I said run one next to those newly identified  
6 exhibit numbers, those are on 743.

7 THE COURT: There's not a separate packing slip,  
8 right?

9 MR. SPERTUS: There is. Each packing slip --

10 THE COURT: What I'm asking is -- I've's already  
11 gone over 3638, 3639, and 3640 with the packing slip,  
12 Exhibit 743.

13 My question is, with respect to what you have now  
14 identified as 3641, 3642, and 3643, is there a different  
15 packing slip?

16 MR. SPERTUS: 3641 is going to be on 743. It's not  
17 a different one. The other two, 3642 and 3643, are going to  
18 be on Exhibit 3120, which is the second of the two packing  
19 slips.

20 THE COURT: Thank you.

21 MR. SHOBAKI: Your Honor, yes, there are two  
22 different packing slips. Each reflects four wafers.

23 THE COURT: That's fine.

24 MR. SHOBAKI: So there's a hodgepodge between these  
25 two.

1 THE COURT: Good. But both of those packing slips  
2 are before the witness.

3 MR. SHOBAKI: Yes, Your Honor.

4 THE COURT: That's fine.

5 MR. SHOBAKI: The other one is 3120.

6 THE COURT: Okay. Has the government had  
7 sufficient time -- any objection to having the witness look  
8 at 3641, 3642, and 3643?

9 MR. SHOBAKI: No objection, Your Honor.

10 THE COURT: Thank you.

11 Mr. Barner, would you take a look at what has been  
12 marked as 3641, 3642, and 3643. And tell me when you've had  
13 a chance to review each of them, please.

14 THE WITNESS: I'd like to open this one.

15 THE COURT: Which one would you like to open?

16 THE WITNESS: This one.

17 THE COURT: What number is that?

18 THE WITNESS: 3641.

19 THE COURT: Any objection to the witness opening  
20 those?

21 MR. SPERTUS: No, Your Honor.

22 THE COURT: Well, any objection?

23 MR. SHOBAKI: No objection, Your Honor.

24 THE COURT: Mr. Barner, before you open it, would  
25 -- will opening it create any risk that the exhibit will be

1 changed because it's -- because the box is opened?

2 THE WITNESS: Only if I touch it. I don't intend  
3 to touch it.

4 THE COURT: Thank you. You may open it.

5 THE WITNESS: There's some scotch tape around it.  
6 I'm having difficulty.

7 THE COURT: Do you need assistance?

8 THE WITNESS: Okay.

9 THE COURT: So you've now looked at what have been  
10 marked as 3641, 3642, and 3643; is that right?

11 THE WITNESS: That's correct.

12 THE COURT: And do you recognize each of these?

13 THE WITNESS: Yes, I do.

14 THE COURT: What is each of them?

15 THE WITNESS: 3641 is an undiced wafer. It refers  
16 to wafer number JE0570-26, I believe. I'm having trouble  
17 looking through the plastic.

18 THE COURT: That's fine.

19 THE WITNESS: It may be 20.

20 THE COURT: Okay.

21 THE WITNESS: 3642 is a diced wafer --

22 THE COURT: Excuse me. Before you move on, --

23 THE WITNESS: Sure.

24 THE COURT: -- if you'd go back and look at  
25 Exhibit 743. Do you see Exhibit 743?

1 THE WITNESS: Yes. It's on the screen.

2 THE COURT: Do you see in that same box where it  
3 says specifications of commodities? Do you see that?

4 THE WITNESS: Yes, I do.

5 THE COURT: Do you see the last one that says one  
6 wafer undiced?

7 THE WITNESS: One wafer undiced?

8 THE COURT: Yes. Do you see that?

9 THE WITNESS: Yes, I do.

10 THE COURT: Does that correspond to Exhibit 3641 by  
11 number?

12 THE WITNESS: Yes, it does.

13 THE COURT: Okay. And with respect to 3642?

14 THE WITNESS: 3642 is a diced wafer. And it  
15 corresponds...

16 THE COURT: To what does it correspond?

17 THE WITNESS: I'm sorry. It's JH0727-45 wafer.

18 THE COURT: And that's -- that is shown on the  
19 foundry packing slip in Exhibit 3120; is that right?

20 THE WITNESS: That's correct.

21 THE COURT: Okay. And Exhibit 3643?

22 THE WITNESS: Again it is a diced wafer. However,  
23 I cannot -- the barcode label has been removed. And short of  
24 inspecting the details of the circuit, I cannot determine  
25 which wafer this is.

1 THE COURT: Okay. And in order to inspect the  
2 details of the circuit, what would you have to do?

3 THE WITNESS: I'd have to look under a microscope  
4 and by reason of it, of elimination between these eight  
5 wafers, to determine that it must be the last remaining  
6 wafer.

7 THE COURT: Well, there's six. We've shown you  
8 six.

9 THE WITNESS: That's true. So I wouldn't know.

10 MR. SPERTUS: Your Honor, exhibit --

11 THE COURT: Just a minute. So let me make sure I  
12 understand. Of the six wafers you have examined today, you  
13 believe that each of them was produced at the Cree foundry in  
14 North Carolina?

15 THE WITNESS: Yes.

16 THE COURT: And you believe that each of them was  
17 then shipped to MicroEx?

18 THE WITNESS: Yes.

19 THE COURT: Now, is there -- are you able to  
20 determine whether the wafers that are in -- that are in these  
21 -- that have been marked as these six exhibits 3638, 3639,  
22 3640, 3641, 3642, 3643, are in the same condition now as they  
23 were in when they were shipped from the Cree plant in North  
24 Carolina?

25 THE WITNESS: Without doing very -- without using a



1 microscope and inspecting the condition of it, I wouldn't be  
2 able to determine that.

3 THE COURT: How long would it take you -- how long  
4 would it take a person who is familiar with the process, do  
5 you think, to make that determination?

6 THE WITNESS: To determine whether or not it is now  
7 in the same condition, visual inspection could take 10 or  
8 15 minutes.

9 THE COURT: Per wafer?

10 THE WITNESS: Per wafer. And if we had to check  
11 whether or not an electrical performance has been changed,  
12 that would be a matter of hours.

13 THE COURT: Per wafer?

14 THE WITNESS: Per wafer.

15 THE COURT: Now, when the wafers are shipped --  
16 before the wafers were shipped, was there a document that  
17 recorded the features or characteristics of the wafer? What  
18 I mean, what I'm asking or what I'm trying to ask is, when  
19 each wafer, when the production of each wafer was completed,  
20 was there a record kept as to what data or features were on  
21 each wafer?

22 THE WITNESS: Yes. By wafer ID we would have kept  
23 all of the processing information, inline test data which  
24 would have included the PCM data, and basic inspection. And  
25 that continues to be in our database on these wafers.

1 THE COURT: So when you mentioned that these wafers  
2 can be examined with a microscope and/or other testing, would  
3 that testing then be -- could that testing be used to  
4 determine whether the wafers in their present condition match  
5 what the data you have concerning the condition of the wafers  
6 at the time they were shipped?

7 THE WITNESS: Yes. We could repeat measurements  
8 of, say, the PCM devices and compare them now to when we  
9 shipped.

10 THE COURT: Okay.

11 Mr. Spertus, do you have any further area of  
12 questioning just as with respect to the issue that we've been  
13 discussing, chain of custody?

14 MR. SPERTUS: All my questions are dealing with  
15 authenticity. And if those are authentic Cree wafers, if the  
16 Court would find those are authentic Cree wafers, I have no  
17 other questions.

18 THE COURT: Does the government have any questions?

19 MR. ROLLINS: Just a few, Your Honor.

20 THE COURT: Go ahead.

21 **EXAMINATION BY MR. ROLLINS**

22 BY MR. ROLLINS:

23 Q. Dr. Barner, just to understand correctly. Without  
24 microscopic inspection, would it be possible to be  
25 100 percent certain that the MMICs on those wafers were

1 manufactured by Cree?

2 A. A hundred percent? No. They would need inspection.

3 Q. And without testing, would it be possible to be  
4 100 percent certain that the MMICs on those wafers were made  
5 by Cree?

6 A. I -- I do not think that we would need to do the testing  
7 unless -- I mean, no, I don't think the testing would be  
8 required to do a hundred percent identification.

9 Q. Sorry. I should have asked a different question.  
10 Without testing, would you be 100 percent certain of the  
11 power levels on those MMICs?

12 A. No.

13 Q. Okay. And can you remember if you have ever seen those  
14 wafers at all before today?

15 A. I can't remember these IDs and wafers.

16 Q. And do you have any idea where those wafers have been  
17 before today?

18 A. No.

19 Q. And how many MMICs would have been on that wafer if it  
20 were manufactured by Cree the moment it left the foundry?

21 A. There two different mask sets, so I would have to go  
22 back and review how many quantity wise were on each mask set.

23 Q. And are you confident that they are now missing MMICs?

24 A. Some of these wafers appear to have die harvested from  
25 the dicing tape.

1 Q. And what do you mean by harvested?

2 A. Picked off the tape.

3 Q. So do you have any idea what would have happened to  
4 those MMICs that were harvested?

5 A. Typically people will take them and build them up into  
6 higher-level assembly for further characterization and  
7 testing.

8 Q. Could they put them in a Chinese missile guidance  
9 system?

10 A. Yes.

11 Q. All of your testimony comparing the labels to the  
12 packing slips a moment ago, that was all predicated on the  
13 accuracy of the labels on those wafers; is that right?

14 A. That is correct.

15 Q. Okay. And you don't know where those labels have been;  
16 do you?

17 A. Not since we shipped.

18 Q. And without talking to people who work for Cree, is it  
19 possible for -- Cree's shipping department, I should say --  
20 would it be possible for you to say with 100 percent  
21 certainty that those labels are genuine Cree labels?

22 A. Yes.

23 Q. Yes?

24 A. Yes.

25 Q. You can say that?

1 A. Yes. I mean -- I mean, no, I --

2 Q. Okay.

3 A. These appear to be an exact copy of the labels that we  
4 would use.

5 Q. Got it.

6 And do you have any way of knowing whether those  
7 wafers were shipped back to the United States after being  
8 exported by the defendant, by his Chinese co-conspirators,  
9 for example?

10 A. I have no knowledge of that.

11 Q. Do you have any idea whether those wafers were brought  
12 back to the United States by Air China pilots?

13 A. No.

14 Q. Do you have any idea whether those wafers were brought  
15 back to the United States by the defendant or one of his  
16 friends after he was arrested?

17 A. No.

18 MR. ROLLINS: I think that's going to be it, Your  
19 Honor. But if I could have a moment to confer with counsel.

20 (Government counsel conferring)

21 BY MR. ROLLINS:

22 Q. I think you testified about one of the wafers being  
23 empty?

24 A. Yes.

25 Q. Would you mind just elaborating a bit for the Court on

1 what that means.

2 THE COURT: What exhibit are you --

3 THE WITNESS: 3639. I can't quite see underneath  
4 the 93-B2GM label that's on the outside of this clamshell  
5 that's holding the diced wafer, but everything I can see is  
6 nearly all if not all of the die on this wafer were removed.

7 MR. ROLLINS: Nothing further, Your Honor.

8 THE COURT: Thanks.

9 Mr. Spertus, do you have any questions?

10 MR. SPERTUS: No questions, Your Honor.

11 THE COURT: Thanks.

12 Mr. Barner, with respect to -- let's take -- sorry.  
13 The exhibit you were most recently discussing, was that 3643?

14 THE WITNESS: 3639.

15 THE COURT: I'm sorry. That's the one you think  
16 that has -- where things may have been removed from it?

17 THE WITNESS: That's correct.

18 THE COURT: Here's my question. Earlier in my  
19 questions I asked you about whether these could be examined  
20 so that they could be compared with the data that you have at  
21 Cree to see whether they are the same as -- whether you  
22 believe they are in the same form or condition as they were  
23 when shipped. Do you recall that?

24 THE WITNESS: Yes.

25 THE COURT: As I understood it, you said

1 microscopic examination would be part of it. And then  
2 another more detailed, a different, more detailed examination  
3 would be part of that; is that right?

4 THE WITNESS: That's correct.

5 THE COURT: Okay. And if those two examinations  
6 were performed, would they identify, for example, the missing  
7 data that was just referenced?

8 THE WITNESS: That's correct. If there's not a die  
9 there to test, then we wouldn't be able to test it. And we  
10 keep track of it by row and column position on the wafer.

11 THE COURT: All right. Now, just to be clear, if  
12 something had been removed, the data that you have in your  
13 system in North Carolina would show that the data was there?

14 THE WITNESS: That's correct.

15 THE COURT: Okay. Is the testing to which you're  
16 referring something that can only -- could the necessary  
17 testing be performed in Los Angeles?

18 THE WITNESS: Sure. If you have that equipment, it  
19 could be done.

20 THE COURT: Okay. And do you know what expertise  
21 would be required of the person or persons who were doing the  
22 testing?

23 THE WITNESS: It would require basic on-wafer test  
24 experience similar to what we have in North Carolina. I  
25 would have to analyze that and create a list of detailed

1 requirements needed.

2 THE COURT: Okay.

3 Any further questions?

4 MR. ROLLINS: One further question that might be  
5 helpful for the Court.

6 Would Cree have ever shipped those wafers empty?

7 THE WITNESS: No.

8 THE COURT: Well, okay.

9 Dr. Barner, you can step down. If you wouldn't  
10 mind just waiting a few minutes for us. You can just wait  
11 outside for a few minutes.

12 Oh, one other question. I'm sorry.

13 This goes back to the other question we talked  
14 about earlier. And that is, you said you're not available  
15 next week, the week of June 3rd?

16 THE WITNESS: That's correct.

17 THE COURT: But you're available the week of  
18 June 10th. And the best days of that week would be June --  
19 any day except June 14th; is that right?

20 THE WITNESS: That's correct. The 14th is a  
21 Friday.

22 THE COURT: Correct. Flag Day.

23 THE WITNESS: Yes.

24 THE COURT: Among those dates, June 10th through  
25 13th, which is Monday through Thursday, is there any of those



1 that's better than another for you?

2 THE WITNESS: Not that I'm aware of. I think it  
3 should be fine.

4 THE COURT: Okay. And how much advance notice  
5 would you need if we need you to be here on one of those  
6 days?

7 THE WITNESS: Three hours from the time you want me  
8 to depart. So that would be approximately 12 hours.

9 THE COURT: Okay. We would give you more notice  
10 than that. But again, just to be clear, it may be necessary  
11 for you to come back. And if that is the case, I will direct  
12 that you do come back. But we'll try to work this out in a  
13 way that's most convenient to you, and we will not give you  
14 three hours' notice.

15 THE WITNESS: Thank you. I appreciate that.

16 THE COURT: I mean, we'll do our best not to do  
17 that. I don't expect that.

18 If you could step down. Thank you.

19 Mr. Spertus, anything you wanted to say?

20 MR. SPERTUS: Your Honor, I think the way that the  
21 government asked questions about can a MMIC be placed in --  
22 it has nothing to do with this case.

23 THE COURT: Well, okay.

24 MR. SPERTUS: This is a testifying witness. Okay?  
25 And as such, I should have said no. Then I have no --

1 THE COURT: No, it's not that. What we're focusing  
2 on here, as you recall, is the issue of authenticity and --

3 MR. SPERTUS: I understand that, but --

4 THE COURT: -- chain of custody. I don't think  
5 those questions bear on that.

6 MR. SPERTUS: This witness will testify in front of  
7 the jury with that argument in his mind, and it bothers me.  
8 But if the Court doesn't see it that way, I understand. I  
9 don't think the government should be allowed to do that.

10 THE COURT: Okay. I understand.

11 MR. ROLLINS: Those questions are directly  
12 relevant, Your Honor, we believe, as to chain of custody. It  
13 goes to where the wafers have been since they were shipped by  
14 Cree.

15 THE COURT: Okay. Well, I understand that. But if  
16 these wafers are tested in the manner that the witness  
17 described with using a microscope and the other materials and  
18 other equipment -- and I didn't get into the details of the  
19 type of equipment other than to ask whether he thought that  
20 equipment is available in Los Angeles -- what I understood  
21 his testimony to be was that they could take the data that  
22 they have stored in North Carolina as to what was on each of  
23 these disks at the time that it was shipped and compare it  
24 with the data that's on it today.

25 Do you agree that's what he said?

1 MR. ROLLINS: Yes, Your Honor.

2 THE COURT: Do you agree with that, Mr. Spertus?

3 MR. SPERTUS: Yes. He said that.

4 THE COURT: So would it make sense to have these  
5 disks tested so that we could confirm that?

6 MR. SPERTUS: I do not believe so because the  
7 standard for a 104 hearing, which I understand this to be, is  
8 can any juror find based on his testimony that these are the  
9 Cree wafers.

10 So what the government's questions, asking can you  
11 testify with 100 percent certainty, and he said, no, I needed  
12 that testing to rise to that level of a hundred percent  
13 certainty, is not close to the threshold finding the Court  
14 needs to make.

15 It's just burdensome, and I feel that with further  
16 change, if the government is going to seriously argue that  
17 removal of a MMIC for testing is somehow a changed condition  
18 of the wafer, okay. So as long as the government is not  
19 going to do that --

20 THE COURT: That's not what I have in mind.

21 MR. ROLLINS: Your Honor, I think the 104 hearing  
22 in this context depends on the type of evidence at issue. In  
23 this case, as the Court has already heard from witnesses, the  
24 evidence is complicated and it's difficult to identify  
25 exactly what MMIC is on a wafer without sophisticated

1 testing.

2 THE COURT: Right.

3 MR. ROLLINS: And the reason -- and I say this with  
4 all due respect to defense counsel, but the reason we are in  
5 this position is because they waited, and they had what we  
6 believe to be evidence in a federal criminal investigation  
7 for more than a year and didn't provide it to the government  
8 or the Court as far as we're aware.

9 So we just got it middle of trial, and that is the  
10 reason we are in this position. In Taylor versus Illinois,  
11 the Court would be well within its discretion to exclude this  
12 for the Rule 16 violations alone.

13 THE COURT: Okay. Well, just a minute. Just a  
14 minute. Is there something new that you wanted to add,  
15 Mr. Spertus, that we haven't discussed before?

16 MR. SPERTUS: Your Honor, this is a full shift to a  
17 separate issue. So, no, on authenticity, nothing to add.

18 THE COURT: Okay. Well, my view is this. I think  
19 there are serious issues presented, that the government has  
20 presented on the discovery matter. And the defense can  
21 respond to include this was rebuttal evidence as to, for  
22 example, the thoroughness of the investigation during the  
23 search.

24 As I think I've explained in the past, it's that  
25 dispute that led me to the path of conducting a hearing to

1 evaluate the -- what I've been calling the chain-of-custody  
2 issue. And today's testimony is part of that.

3 I think that in response to, Mr. Spertus, your  
4 point, I think what the -- I think it's appropriate to gather  
5 the information as to how, if at all, the disks -- I'll call  
6 them that -- Exhibits 3638 through 3643, whether how, if at  
7 all, they're different today than they were when they were  
8 shipped, because that information may be pertinent to some  
9 arguments the government may wish to present.

10 I think also frankly today's testimony probably --  
11 I don't know that we're going to learn anything new from your  
12 legal assistant, because if the testing is done in that  
13 fashion, then I think that would be -- that would -- that  
14 would be what's necessary.

15 Do you disagree with that?

16 MR. ROLLINS: One clarifying point, Your Honor. We  
17 still would need foundation for where the wafers were from  
18 the moment they left the defendant's house to the moment they  
19 showed up in court.

20 So defense counsel could theoretically be able to  
21 argue, oh, we retrieved these from our client's home on this  
22 date. But so far there are no facts in evidence to support  
23 that.

24 THE COURT: That's fine. I mean --

25 MR. ROLLINS: Similar issues with Canada, Your

1 Honor, with the Canadian wafers. Similar basic foundational  
2 issues on where those have been since they were retrieved by  
3 the paralegal. So that is something the government  
4 would definitely want to elicit through the --

5 THE COURT: Okay. And is the reason for that the  
6 authenticity or because it would go to whether they may have  
7 moved outside the United States in the interim?

8 MR. ROLLINS: All of the above frankly, Your Honor.  
9 It could be said that those were genuine wafers perhaps, but  
10 you could not establish where they had been at any point  
11 after they left Cree. And that would be something the  
12 government would need to explore.

13 THE COURT: All right. I understand. I  
14 understand. But I think again for purposes -- I understand  
15 that, but I see that as a distinct issue from authenticity.

16 MR. ROLLINS: I think I agree with the Court on  
17 that.

18 THE COURT: Do you disagree with that?

19 MR. SPERTUS: Your Honor, I don't disagree. I  
20 think --

21 THE COURT: Go ahead. I think what needs to be  
22 done is these wafers should be tested here in Los Angeles  
23 promptly.

24 MR. SPERTUS: If they're -- okay. Fine. Fine.

25 THE COURT: It's not -- to be clear, I'm not --

1 I've just said I don't think we need a hearing with your  
2 legal assistant in terms of are these the wafers that were  
3 retrieved that your legal assistant retrieved. Why don't I  
4 think that? Because we have a witness who is saying that the  
5 witness that said technological evaluations can be made that  
6 can compare them with what was sent from the Cree factory in  
7 North Carolina several years ago.

8 MR. ROLLINS: Right. I think the issue would come  
9 when the jury could potentially be confused by a line of  
10 questioning that assumes facts not in evidence, which would  
11 be that these were in the defendant's home on the date of the  
12 search. That would assume facts not in evidence.

13 THE COURT: I understand. Well, those matters,  
14 yes, you're right. We could have a hearing on that. I think  
15 the focus -- what I have now in mind in light of the  
16 discovery objection would be to have these six exhibits  
17 tested so that the data that's -- well, I'm repeating  
18 myself -- so the data can be compared to what it was at the  
19 time they were shipped.

20 Each side can then assess with the help of experts  
21 what if -- if that's what -- whether or not that's material.

22 MR. ROLLINS: We will attempt to see if Dr. Barner  
23 can use a lab in Los Angeles to do that testing, Your Honor,  
24 and we will report back to the Court.

25 MR. SPERTUS: Your Honor, the only -- the only

1 objection the defense has is that there are six disks  
2 presently in the Court's custody -- I mean, you know,  
3 possession. What the Court is proposing is going to let them  
4 out of the building.

5 And if Dr. Barner for whatever reason leaves them  
6 in a cab, they will be gone. I'm not saying he would. But  
7 to -- given that authenticity we submit can't reasonably be  
8 questioned in light of the testimony received, a juror could  
9 conclude those are the Cree wafers based on Dr. Barner's  
10 testimony. I don't want to put those wafers at risk.

11 THE COURT: I understand, but I don't think that's  
12 quite the issue. I -- for the reasons I've explained, it's  
13 not enough for me -- in light of the discovery issue, I think  
14 it's appropriate to have these tested.

15 Now, you've certainly -- I agree that it must be  
16 done in an extremely careful manner in that we wouldn't just  
17 necessarily, for example, turn over the six exhibits to an  
18 individual and tell the individual that he or she may take  
19 these to wherever he or she wants and test them.

20 I think that we need to have a protocol established  
21 before they leave the courtroom. The protocol would include  
22 how will they be transported, by whom, and who can be  
23 present, for example, if anyone, during the testing.

24 Then I think it would also -- I assume that each  
25 side would also like to have the opportunity to examine the



1 data from North Carolina. Each side would also like to know  
2 what data is being gathered from North Carolina to be used to  
3 compare these disks with that data, because the parties may  
4 agree or disagree that the data that's being used is  
5 appropriate.

6 Again, I'm not -- it's not that I think that's  
7 likely, but I think you would probably both want to know.  
8 You both may want to have -- I don't have -- I mean, I can  
9 think of various ways this could occur.

10 There could be an independent tester who can do the  
11 testing independently, appointed by the Court as a court  
12 expert, and each party could have a person present  
13 potentially during that, while that expert does what that  
14 expert is going to do.

15 I mean, there's various ways to do this, but I  
16 think efficiency and fairness warrants your discussing it and  
17 see if you can come to an agreement, because I don't have  
18 enough information. For example, where in Los Angeles could  
19 this be tested? Who would be able to do the testing?

20 If Mr. Barner is not available next week, you know,  
21 when would he -- he said this would be several hours. When  
22 could the testing be completed? I don't want it to take two  
23 weeks. I'd like it to get done quickly.

24 MR. SPERTUS: The one other mechanical issue is  
25 that almost every percipient witness to the ordering process

1 will have to be subject to recall, which could be avoided if  
2 the Court believes that the current testimony is sufficient.  
3 For example, Kiet Mai could be excused. If I can't show him  
4 the wafers, he would be subject to recall.

5 And at some point in time, I think that there's  
6 sufficient evidence for authenticity that will allow the  
7 trial to go forward without having to recall witnesses.

8 THE COURT: Well --

9 MR. ROLLINS: Your Honor, we don't believe he  
10 should be used for cross for the reasons we stated in our  
11 brief, because the issue is it creates the false impression  
12 or at least an impression that we do not yet know to be true  
13 that these were in the defendant's home on the date of the  
14 search.

15 Then the other point, Your Honor, and I know the  
16 Court is trying to be fair to both parties on this issue, but  
17 it's just that from our perspective the fair thing to do is  
18 to allow the government to conduct its examinations and tests  
19 because the defense has now stated that they intend to  
20 introduce these into evidence.

21 They've had them for a year, as I said, and they've  
22 had an opportunity to do their own examination and testing.  
23 At this point it really should be fair, would be fair to the  
24 government I think to have the opportunity to do the same  
25 thing.

1 THE COURT: Well, it -- Mr. Spertus?

2 MR. SPERTUS: I want to make an objection to that  
3 process. We don't want -- they're in the Court's possession  
4 now. We think it would be very unfair to release them to the  
5 government.

6 THE COURT: What I want -- I think what I've  
7 explained, whether it's deemed -- Mr. Rollins, are you  
8 suggesting that the government -- if hypothetically the  
9 government were given leave to do the testing, would the  
10 government then have any disclosure obligation to the defense  
11 as to the test results?

12 MR. ROLLINS: Certainly, Your Honor, and we would  
13 provide that to the defense.

14 THE COURT: All right. Well, I think -- sorry. Go  
15 ahead.

16 MR. SPERTUS: The only point is the process of  
17 testing damages the MMICs. To give the government the tools  
18 to then say these somehow are changed from the date that they  
19 came from Cree --

20 THE COURT: I understand. The testing needs to be  
21 done by a qualified person in, I don't know if you'd call it  
22 a laboratory, but it needs to be done in a proper manner.  
23 And whether -- so that's what I need to know. I need to know  
24 -- it's not necessarily about whether the testing is under  
25 the control of the -- testing will be under the control of

1 the Court. And then I want to ensure that the laboratory is  
2 qualified, that the person conducting the testing is  
3 qualified, and that the, you know, appropriate steps will be  
4 taken to protect the integrity of this evidence both in terms  
5 of transporting it from the Court to a laboratory and then  
6 transporting it back.

7 Yes, Mr. Hanusz.

8 MR. HANUSZ: Your Honor, if I may, our  
9 understanding of just how the testing works is that there  
10 will be probe marks then placed on -- so at the time the  
11 testing is conducted, the testing itself will change the  
12 condition of the MMICs from the condition they're in today.

13 THE COURT: Yes.

14 MR. HANUSZ: So if the government is concerned  
15 about that being an issue, it just adds more uncertainty to  
16 that process.

17 THE COURT: But they can be -- you've already  
18 photographed them.

19 MR. SPERTUS: Your Honor, for example, I on  
20 cross-examination of Dr. Barner asked him whether he would be  
21 able to tell whether the undiced wafer PCMs had been removed  
22 or tested and things like that. He said, yes, with a visual.

23 If we give these wafers to the government, what is  
24 now a pristine surface will become marked and he will say  
25 that, yes, the testing occurred. So the process of this

1 testing will prevent us establishing at trial that these  
2 wafers were not in fact tested by Dr. Shih as alleged in the  
3 government's direct of Dr. Barner.

4 THE COURT: I'm not quite following that.

5 MR. SPERTUS: Okay.

6 THE COURT: Because if the -- I think this goes to  
7 the capability of the tester, because the tester should be  
8 able to take the current condition and compare it to the  
9 condition from the data in North Carolina. And the tester  
10 should also --

11 MR. SPERTUS: I don't think that the government is  
12 alleging, is going to allege that these are counterfeited,  
13 but that's --

14 THE COURT: That's not --

15 MR. SPERTUS: -- the only reason -- testing will  
16 only be relevant to that issue, are these counterfeit MMICs.

17 THE COURT: I don't think that's quite it. I think  
18 the issue is whether they were changed between the time they  
19 were shipped from North Carolina and now and prior to the new  
20 testing.

21 MR. SPERTUS: I don't think the government is  
22 alleging that the circuitry has changed.

23 THE COURT: Well, there is some issues about what  
24 was removed.

25 MR. SHOBAKI: Your Honor, to be clear here, we just

1 don't know. There's one of these wafers that showed up with  
2 no barcode whatsoever on it. We know that there is a MMIC  
3 foundry now in China, for example, where you could take the  
4 same design and make the MMICs again.

5 So that's part of why we want to have some  
6 inspection. I think that Dr. Barner's testimony was twofold.  
7 He said that he could from visual inspection come to a decent  
8 -- like a fair degree of certainty as to whether they were  
9 the -- whether they appeared to be the same design that had  
10 been manufactured by Cree.

11 THE COURT: Yes.

12 MR. SHOBAKI: And there was another line of  
13 questioning that related to the electronic testing and the  
14 question as to whether, for example, the PCMs which had been  
15 tested at Cree were then subsequently retested.

16 You know, he suggested that that -- doing some --  
17 you need to do more work to do an electronic test of the  
18 components. However, I'd like to -- I think we can confer a  
19 little bit on this, but I think that with respect to whether  
20 he's able to determine that these indeed appear to be  
21 Cree-manufactured wafers and circuitry, I believe he said  
22 that he could determine that in large part by looking at them  
23 under a microscope or someone qualified under a microscope.

24 I think we can confer with Dr. Barner and determine  
25 if possibly there's some place in Los Angeles where that type

1 of equipment is available. I assume that there is. Whether  
2 we could do, you know, whether it would be possible to  
3 arrange for some sort of protocol to get over there. And  
4 perhaps even have him look at it. I mean, he's certainly a  
5 person who's qualified to know what Cree products look like.

6 THE COURT: All right. I understand. I think -- I  
7 think you need to look into this promptly. I think there's  
8 two issues here. One is authenticity. Are these Cree  
9 wafers? And the testimony was, from the witness, he believes  
10 they are. To be sure, he acknowledged that was based on the  
11 tags that are on the wafers themselves, the barcode.

12 So hypothetically could somebody take the same  
13 barcode or create it somehow and put it on a different wafer?  
14 I suppose hypothetically that's somehow possible, but that's  
15 not what he thought.

16 So if microscopic examination is all that would be  
17 necessary, then it shouldn't cause any change to the wafers.  
18 If something beyond that is necessary, I'll need to hear  
19 about what it is in terms of assessing how to proceed.

20 To be clear, to be sure, I don't know that the --  
21 if the concern, for example, were that there is -- that the  
22 testing would result in some physical change to the  
23 appearance of one of the six exhibits, I don't know how  
24 material it would be to the jury, because the jury is just  
25 looking at something that looks like -- they're comparing to

1 something with which they're familiar.

2 They -- it could also be explained that this change  
3 was due to testing that occurred, you know, due to testing.  
4 Here are the photographs that were made, dated, and that show  
5 that prior to the testing it wasn't -- that feature wasn't  
6 there.

7 MR. SPERTUS: It's not -- Your Honor, that point is  
8 -- has nothing to do with the jury's examination of the  
9 wafers. It has to do with how Dr. Barner would testify when  
10 I asked him to look at the undiced wafer and determine  
11 whether any testing was done on it.

12 If I had been able to show him that, I proffer his  
13 answer would have been, no, there was no testing.

14 THE COURT: Well, that's not --

15 MR. SPERTUS: I want that answer on the recall  
16 testimony.

17 MR. SHOBAKI: Your Honor, I think the transcript  
18 clearly shows that that's not what Dr. Barner said. He said  
19 it would be possible for testing to be done by someone with  
20 sufficient skill such that you wouldn't be able to tell.

21 Again, I think the point is, you know, the Court is  
22 asking about getting some sort of verification to assure  
23 itself about the authenticity of these items. The record  
24 that we have today reflects that at the very least,  
25 microscopic examination would be appropriate.



1           Again, you know, we're here because of equal  
2           egregious violations of Rule 16. So, you know, that's what  
3           puts us in this bind in the middle of trial, Your Honor,  
4           which is exactly why the rules exist.

5           THE COURT: Okay. Well, I understand. You'll  
6           agree to disagree on that, but it's guiding in part my  
7           approach here, because I think a suitable expert can, whether  
8           it's Dr. Barner or a different person, appropriately examine  
9           these things and without -- either without modifying them by  
10          doing microscopic examination or, if there has to be some  
11          modification, doing it in a fashion that is appropriately  
12          recorded so that there is no question about when something  
13          changed.

14          Before there would be a modification -- because I  
15          would have to approve this. Before there would be a  
16          modification, the issue would be, well, do we need to hear  
17          testimony from Dr. Barner prior to the testing so that he can  
18          examine the item in its current condition?

19          You know, if hypothetically you find that you --  
20          that the government proposes only a microscopic examination  
21          and it's done by a capable -- in a capable facility and we  
22          have an appropriate means of assuring careful transport to,  
23          appropriate oversight during, and appropriate transport back,  
24          then I think we can address many of these problems.

25          MR. SPERTUS: Very well, Your Honor.

1 THE COURT: Okay. So get on this, please.

2 MR. SHOBAKI: Thank you, Your Honor.

3 MR. ROLLINS: Thank you, Your Honor.

4 THE COURT: Thanks for your help.

5 Oh, wait a minute. One other question. Did  
6 Dr. Barner go? I asked him about days he would -- that would  
7 be most convenient during the week of June 10th. He said any  
8 of the days, 10 through 13.

9 Do you think we should pick a day now and ask him  
10 to make himself available for that day if needed?

11 MR. SPERTUS: I just have my cell phone off. Any  
12 day convenient for the Court is fine. I would submit a  
13 Tuesday. That's just one of those days that's usually --

14 THE COURT: June 11th?

15 MR. SHOBAKI: Your Honor, I think that it's  
16 probably best to do that. And, you know, at least  
17 preliminary thinking is if Dr. Barner would be able to assist  
18 with any examination, that we might be able to get him here,  
19 for example, on Monday to do it.

20 But we need to talk to him, and we need to find out  
21 about facilities and figure that out.

22 I did have one total pivot, which is to just also  
23 ask for the Court's guidance with respect to our schedule  
24 next week. We're trying to coordinate travel.

25 THE COURT: First of all -- just a minute. Next

1 week, Tuesday, June 4, is when juror number 8, I think it  
2 is -- same one. June 4 is when juror 15 has the family  
3 graduation which I was hoping would be in the afternoon or  
4 evening but which is in the morning.

5 So there's an issue about June 4th. If she goes to  
6 the -- I mean, obviously I can tell her, no, you can't go to  
7 your daughter's graduation, but I'd prefer to accommodate  
8 her. The jurors are accommodating us for a long period of  
9 time.

10 Then on June 5 I'm committed in the morning from  
11 9:00 to 12:00, although -- well, we've got several hundred  
12 students coming here, so I'm committed in the morning, and  
13 this courtroom will be in use for that. So -- although  
14 perhaps I could make some adjustments to that if necessary.

15 At the moment I would say that it would be in  
16 session on June 5 in the afternoon. We can go later. We  
17 need to make up some of the time. June 6 and June 7 are not  
18 issues, correct? And the following week, June 10, there's no  
19 issues.

20 Then during the week of June 17 we do have an issue  
21 because one of the jurors, juror number 5, has this vacation  
22 plan to be away that week, through the 25th. Now, perhaps  
23 we'll be finished by then. I don't know. But that's out  
24 there at the moment, and there are various options there.

25 I don't think we can get there yet. I think we'll

1 be better able to evaluate that when we get closer. You  
2 disagree with that?

3 MR. SPERTUS: No, Your Honor.

4 MR. SHOBAKI: No, Your Honor.

5 THE COURT: Okay. So I think we have to be -- I  
6 think we need to give juror 15 the graduation day of June 4.  
7 I'm tied up, I said, on the morning of June 5. If it becomes  
8 essential I can probably -- I can make some accommodation to  
9 make myself available before noon.

10 But then, as I say, I'm willing to go later that  
11 day so that we'll make up the time we lose. And then I think  
12 there's no issue through June 14. So does that assist you  
13 with your schedule?

14 MR. SHOBAKI: Yes, Your Honor. If I'm hearing  
15 correctly, we're going to not be in session on June 4?

16 THE COURT: Correct, because that's the graduation  
17 day. I mean, I can say go to the graduation in the morning  
18 and then come here in the afternoon and skip all the family  
19 events and we'll be in session from 1:00 to 5:00, but I...

20 MR. SPERTUS: Your Honor, I agree.

21 MR. SHOBAKI: You've advocated compellingly for  
22 taking the day off.

23 THE COURT: From what is she graduating? It's a  
24 school. Okay.

25 Okay. That's the plan. We'll see you tomorrow at

1 8:30.

2 MR. SPERTUS: Thank you, Your Honor.

3 MR. ROLLINS: Thank you, Your Honor.

4 MR. SHOBAKI: Thank you, Your Honor.

5 THE COURT: If Dr. Barner is still here, perhaps  
6 you can confer with him. We'll let him know when we can as  
7 to what day of the week.

8 MR. SHOBAKI: Yes.

9 THE COURT: You'll let me know as soon as you know  
10 about your proposed process for testing. Confer with defense  
11 about that and let me know what you agree on.

12 MS. HEINZ: Thank you, Your Honor.

13 (Proceeding adjourned at 2:51 p.m.)

14 CERTIFICATE

15 I HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT  
16 TRANSCRIPT OF THE STENOGRAPHICALLY RECORDED PROCEEDINGS IN  
17 THE ABOVE MATTER.  
18 FEES CHARGED FOR THIS TRANSCRIPT, LESS ANY CIRCUIT FEE  
19 REDUCTION AND/OR DEPOSIT, ARE IN CONFORMANCE WITH THE  
20 REGULATIONS OF THE JUDICIAL CONFERENCE OF THE UNITED STATES.

21  
22 /s/ Miriam V. Baird

06/03/2019

23 MIRIAM V. BAIRD  
24 OFFICIAL REPORTER

DATE